

DRAFT
SUBSEQUENT ENVIRONMENTAL IMPACT REPORT
No. 2021-001

WARD LAKE QUARRY EXPANSION
Use Permit Amendment (No. 2021-003)
Reclamation Plan Amendment (No. 2021-001)

State Clearinghouse No. 202110627

Prepared for:

Lassen County

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MARCH 2022

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1.0 INTRODUCTION

1.1 Purpose of Environmental Impact Report

Lassen County (County) is a Lead Agency under the California Environmental Quality Act (CEQA) and the County's Department of Planning and Building Services is responsible for preparing the Draft Subsequent Environmental Impact Report (DSEIR for Use Permit Amendment No. 2021-003 and Reclamation Plan Amendment No. 2021-001 addressing the proposed 78.6-acre mine boundary expansion at the existing Ward Lake Quarry (proposed Project) (State Clearinghouse No. 2021010627). This DSEIR has been prepared in conformance with CEQA (California Public Resources Code [PRC] §21000 et seq.), California CEQA Statutes and Guidelines (California Code of Regulations [CCR], Title 14, §15000 et seq.), and the rules, regulations, and procedures for implementation of CEQA, as adopted by the County.

CEQA requires the preparation of an EIR prior to approving any project that may have a significant effect on the environment. For the purposes of CEQA, the term project refers to the whole of an action, which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines §15378[a]). Pursuant to CEQA's definition, the County has determined that the proposed Use Permit Amendment No. 2021-003 and Reclamation Plan Amendment No. 2021-001 is a project, which has the potential for resulting in significant environmental effects. The purpose of this DSEIR is to review the existing conditions, analyze potential environmental impacts, and identify feasible mitigation measures to reduce potentially significant effects related to the proposed Project.

An EIR is an informational document that appraises decision-makers and the general public of the potential significant environmental effects of a proposed action. An EIR must describe a reasonable range of feasible alternatives to the project and identify possible means to minimize the significant effects. The Lassen County Planning Commission and the Board of Supervisors will consider the information in the SEIR, including the public comments and staff response to those comments, during the public hearing process. As a legislative action, the final decision is made by the Board of Supervisors, who may approve, conditionally approve, or deny the project. As provided in CEQA Guidelines §15021, public agencies are charged with the duty to avoid or minimize environmental damage where feasible. The public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social issues. The purpose of an EIR is to identify:

- The significant potential impacts of the project on the environment and indicate the manner in which those significant impacts can be avoided or mitigated;
- Any unavoidable adverse impacts that cannot be mitigated; and
- Reasonable and feasible alternatives to the project that would eliminate any significant adverse environmental impacts or reduce the impacts to a less than significant level.

An EIR also discloses growth inducing impacts; impacts found not to be significant; and cumulative impacts of the project when taken into consideration with past, present, and reasonably anticipated future projects.

The County, which has the principal responsibility of processing and approving a proposed project, and other public agencies that may use this SEIR in the decision making or permit process, will consider the information in this SEIR, along with other information that may be presented during the CEQA process. CEQA requires an EIR that reflects the independent judgment of the lead agency regarding the impacts, the level of significance of the impacts both before and after mitigation implementation, and mitigation measures proposed to reduce the impacts. Environmental impacts are not always mitigable to a level considered less than significant; in those cases, impacts are considered significant unavoidable impacts. In accordance with §15093(b) of the CEQA Guidelines, if a public agency approves a project that has significant impacts that are not substantially mitigated (i.e., significant unavoidable impacts), the agency shall state in writing the specific reasons for approving the project, based on the Final EIR and any other information in the public record for the project. This is termed, per §15093 of the CEQA Guidelines, a “statement of overriding considerations.”

This document analyzes the environmental effects of the proposed Project to the degree of specificity appropriate to the current proposed action, as required by §15146 of the CEQA Guidelines. The analysis considers the actions associated with the proposed Project to determine the short-term and long-term effects associated with their implementation.

1.2 Subsequent EIR

In accordance with CEQA Guidelines §15121(a), the purpose of this DSEIR is to:

- Inform public agency decision makers and the public of any significant environmental effects that would result from the project.
- Identify possible ways to minimize any significant effects; and
- Identify reasonable alternatives to the project.

Pursuant to CEQA Guidelines §15162(a), when an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole record, one or more of the following:

- 1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- 2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- 3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time of the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:

- a) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
- b) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
- c) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
- d) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Based on finding 3(b) above, the County determined that a subsequent EIR should be prepared to evaluate the impacts related to the substantial changes in the proposed Project from the currently approved mining operation.

1.3 Summary of Proposed Project

The site has been used as an active rock quarry since 1980 and currently operates under Lassen County Use Permit No. 96056, adopted in September 1997; Reclamation Plan No. 94032, adopted in July 1994; and Lassen County Use Permit No. 2018-003 and Reclamation Plan No. 2018-001 adopted in 2019.

This proposed Use Permit and Reclamation Plan Amendment requests an expansion of the quarry area, extension of the life of the mine, and increase in annual volume removed. The proposed changes to the current use permit and reclamation plan include:

- Expansion of approximately 78.6 acres, with an associated additional volume of 5,000,000 tons of material.
- Extension of life of the mine from 2030 to 2050.
- Increase of maximum volume per year from 100,000 tons to 200,000 tons per year.

Three previous EIRs have been prepared for mining operations at the Project site. These include the completion of an EIR in May 1981 (SCH No. 80062304) associated with issuance of the 1981 Use Permit for operations at the site. The mining operation again underwent CEQA review with an EIR to address operational amendments in 1997 (SCH No. 1994051008). An additional EIR (SCH No. 2018022056) was completed in 2019 to address:

- Addition of limited 24-hour operations to meet Caltrans contracting requirements,
- Extension of mine life to 2030, and
- Allowance of annual tonnage in excess of the 100,000 tons in emergency situations.

This DSEIR addresses additional changes in site operations (“proposed Project” or “proposed quarry expansion”) and evaluation of the potential to result in significant impacts not addressed in the previous environmental documents prepared for the currently permitted operations at the Project site.

1.4 Documents Incorporated by Reference

CEQA Guidelines §15150 permits documents of lengthy technical detail to be incorporated by reference in an EIR. This DSEIR relies, in part, on information previously prepared for operations at the Project site, and incorporates information provided in the previous three EIRs prepared for operations at the site. The EIRs include background information on the Project site as well as analyses of the environmental impacts of the currently permitted operation at the site. Pursuant to CEQA Guidelines §15150(e)(f), these documents were used primarily to describe the environmental setting, provide general background material, or communicate descriptive technical material. The documents listed below are incorporated by reference as source documents for this DSEIR.

Lassen County General Plan

The *Lassen County General Plan*, adopted in September 1999, is the long-range planning guide for growth and development for Lassen County. The General Plan helps to ensure that day-to-day decisions conform to the long-range program designed to protect and further the public interest as related to the County’s growth and development and mitigate environmental impacts. The General Plan also serves to guide the private sector of the economy in relating its development initiatives to the public plans, objectives, and policies of the County. The General Plan contains a Land Use Element, Natural Resources Element, Agriculture Element, Wildlife Element, Open Space Element, Circulation Element, and Safety and Seismic Safety Element. The County’s General Plan was utilized throughout this DSEIR as the fundamental planning document governing development on the proposed Project site. Background information and policy information from the General Plan is cited in several sections of this DSEIR.

Standish-Litchfield Area Plan

The *Standish-Litchfield Area Plan* was adopted in 1986 and was intended to guide decisions regarding land use for an approximate 20-year timeframe. In the plan, it is stated, “The plan is long-range in nature and should be reviewed every five years to determine whether it still reflects community values.” The Area Plan contains three categories: Environmental Safety, Natural and Cultural Resources, and Community Development. It has been more than 20 years since the Area Plan has been adopted; however, since there have not been any updates since 1986, the goals, policies, and implementation measures are still applicable to the proposed Project.

Operation of Aggregate Materials Source, Operation of Rock Crushing Plant, Operation of Asphalt Concrete Batch Plant EIR (SCH No. 80062304)

An EIR was prepared for the initial Miller’s Custom Work, Inc., mining operation at the Project site in 1981. The 1981 project included the use of 80 acres within the 240-acre parcel as a source for aggregates and asphaltic concrete materials. In addition to the excavation and removal of materials, a rock crushing and asphalt concrete batch plant (hot plant) were included in the project.

The EIR included an overall description of the project, identified potentially significant adverse impacts of the project, and proposed mitigation measures to reduce or eliminate the potential adverse impacts. This document is available for inspection upon request at the County's Department of Planning and Building Services during normal business hours (Monday through Friday; 8:00 a.m. to 5:00 p.m.). The 1981 EIR identified the following impacts to be significant and unavoidable:

- Changes in Existing Topography
- Noise
- Air
- Traffic
- Impacts to Wildlife
- Aesthetics

Miller's Custom Work, Inc., Ward Lake Pit Expansion EIR (SCH No. 1994051008)

Miller's Custom Work, Inc. Ward Lake Pit Expansion Environmental Impact Report (Ward Lake Expansion EIR), SCH No. 1994051008, was prepared in 1997. The project analyzed in the EIR included the expansion of an aggregate and excavation and processing operation currently operation under Lassen County Use Permits No. 79-80-44, No. 11-02-85, and No. 94032, and Reclamation Plan No. 94032. This document is available for inspection upon request at the County's Department of Planning and Building Services during normal business hours (Monday through Friday; 8:00 a.m. to 5:00 p.m.). The project analyzed in the EIR included:

- The rezoning of the parcel from U-C (Upland Conservation) to U-C-2 (Upland Conservation/Resource Management) to allow operation of a ready-mix concrete plant (already onsite and operating within limits imposed by the Superior Court).
- Onsite production of ready mix concrete added to the use permit as an allowed use.
- Increase in the height of the exposed rock quarry face from the existing +/- 84 feet to a maximum of 150 feet with associated increase in harvest volume from 500,000 cubic yards (cy) to 1,700,000 cy.
- Expansion of the season of operation from seven months (April through October) to year-round as weather permits.

The Ward Lake Pit Expansion EIR identified potentially significant impacts resulting from the expansion of the mining operation and offers mitigation measures to reduce the impacts to less than significant. The EIR focused on two issues of concern: 1) Project impacts on local deer and animal herds and 2) visual impacts. The EIR focused on these two areas and other issues taken from the August 1996 Initial Study prepared for the expansion. The Ward Lake Pit Expansion EIR identified the following impacts as significant and unavoidable:

- Short-term, close-in, visual impacts.
- Cumulative short-term, close-in, visual impacts.

Hat Creek Construction and Materials, Inc., Modifications to Ward Lake Quarry Operations Subsequent EIR (SCH No. 2018022056)

The *Hat Creek Construction and Materials Inc, Modifications to Ward Lake Quarry Operations Subsequent Environmental Impact Report*, SCH No. 2018022056, was prepared in 2019. The project analyzed in the SEIR included amendments to the operations at the site. The amendment included the following changes to existing permitted operations at the quarry:

- Allow for 24-hour mining operations, Monday through Saturday (currently, the use permit allows operations from 6:00 a.m. to 7:00 p.m., Monday through Saturday).
- Extend the life of the mine from 2020 to 2030.
- Allow annual site production in excess of the permitted 100,000 tons during federal, State, or County declared emergencies.

The SEIR identified potentially significant impacts resulting from the expansion of the mining operation associated with aesthetics, biological resources, land use and planning, noise, and traffic. Following analysis, the SEIR identified the following impacts as significant and unavoidable:

- Visual impacts associated with the nighttime headlights and onsite nighttime lighting from 24-hour operations could not be mitigated.
- Impacts to pronghorn and mule deer, found to be significant and unavoidable in previous EIRs, would remain so with the extension of the life of the mine site.
- Traffic noise on Ward Lake Road associated with truck traffic during 24-hour operations could not be mitigated and would be significant and unavoidable.

Previous EIR Mitigation Measures

The 1981, 1997, and 2019 EIRs prepared for operations at the Project site include standard conditions and mitigations measures that apply to the operation of the Project. Conditions of Approval and Operating Conditions for the current mining operation are discussed further in Section 3.5, *Proposed Use Permit and Reclamation Plan Amendments*.

1.4 Responsible and Trustee Agencies

Certain projects or actions undertaken by a Lead Agency require subsequent oversight, approvals, or permits from other public agencies to be implemented. Such other agencies are referred to as “Responsible Agencies” and “Trustee Agencies.” Pursuant to CEQA Guidelines §15381 and §15386, as amended, Responsible Agencies and Trustee Agencies are respectively defined as follows:

- “Responsible Agency” means a public agency that proposes to carry out or approve a project for which a Lead Agency is preparing or has prepared an EIR or Negative Declaration. For the purposes of CEQA, the term “Responsible Agency” includes all public agencies other than the Lead Agency that have discretionary approval power over the project (CEQA Guidelines §15381).

- “Trustee Agency” means a State agency having jurisdiction by law over natural resources affected by a project that are held in trust for the people of the State of California. Trustee Agencies include . . . (CEQA Guidelines §15386).

Responsible and Trustee Agencies and other entities that may use this SEIR in their decision-making process or for informational purposes include, but may not be limited to, the following:

- California Air Resources Board
- California Department of Fish and Wildlife
- California Department of Water Resources
- California Department of Transportation
- California Regional Water Quality Control Board
- California Water Resources Control Board
- Native American Heritage Commission
- State Office of Historic Preservation

1.6 Public Scoping

In accordance with CEQA, a good-faith effort has been made during the preparation of this DSEIR to contact affected agencies, organizations, and persons who may have an interest in this Project. This effort included circulation of the Notice of Preparation (NOP) of this DSEIR by the Lead Agency to the California Office of Planning and Research on April 28, 2021. The NOP was mailed directly to parties with interest in the proposed Project. The NOP was mailed to the following agencies and organizations:

County

Lassen County Air Pollution Control District
Lassen County Assessor’s Office
Lassen County Counsel
Lassen County Environmental Health Department
Lassen County Fire Warden
Lassen County Fish and Game Commission
Lassen County Public Works – Road Division

State

California Air Resources Board
California Department of Conservation, Division of Mine Reclamation
California Department of Fish and Wildlife
California Department of Forestry and Fire Protection
California Department of Parks and Recreation
California Department of Toxic Substances Control
California Department of Transportation – District 2
California Department of Water Resources
California Highway Patrol
California Office of Historic Preservation
California Office of Planning and Research – State Clearinghouse
California Regional Water Quality Control Board – Lahontan Region
California State Lands Commission

Federal

Bureau of Land Management – Susanville

Native American Groups

Greenville Rancheria of Maidu Indians
Honey Lake Maidu
Native American Heritage Commission
Pit River Tribe of California
Susanville Indian Rancheria
Washoe Tribe of Nevada and California

Fire Protection Districts

Standish-Litchfield Fire Protection District

Supervisors

Supervisor Hammond

School Districts

Shaffer Elementary School

The purpose of the NOP was to solicit comments from public agencies on issues germane to that agency that should be considered in the DSEIR. The public review period for the NOP ends approximately 30 days after public distribution of the NOP. The NOP and comment letters received are included in Appendix A. Comment letters received in response to the NOP were considered during preparation of this DSEIR.

1.7 Review of DSEIR

This DSEIR will be published and made available to local, regional, State, and federal agencies and to the interested organizations and individuals who may want to review and comment on the adequacy of the analysis include in the DSEIR. Notice of this DSEIR will also be sent directly to the parties that commented on the NOP. The DSEIR will undergo a 45-day public review period.

Following the close of the public comment period, responses to comments on the DSEIR will be prepared and published as a separate document. The DSEIR, together with the responses to comments document, will constitute the Final SEIR. The Final SEIR will be considered by the Lead Agency prior to any action taken on the proposed Project. Written comments on the DSEIR must be sent to:

Lassen County
Department of Planning and Building Services
707 Nevada Street, Suite 5
Susanville, CA 96130
Attn: Cortney Flather
Email: cflather@co.lassen.ca.us

Guidelines for Commenting on the DSEIR

The purpose of the public review of the DSEIR is to evaluate the adequacy of the environmental analysis in terms of compliance with CEQA. CEQA §15151 states the following regarding standards from which adequacy is judged:

“An EIR should be prepared with sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible.”

CEQA §15204(a) provides guidance to assist members of the public and public agencies in preparing comments on a DSEIR. Section 15204.5(a) states:

“In reviewing draft EIRs, persons and public agencies should focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated.

Comments are most helpful when they suggest additional specific alternatives or mitigation measures that would provide better ways to avoid or mitigate the significant environmental effects. At the same time, reviewers should be aware that the adequacy of an EIR is determined in terms of what is reasonably feasible, in light of factors such as the magnitude of the project at issue, the severity of its likely environmental impacts, and the geographic scope of the project. CEQA does not require a Lead Agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commenters. When responding to comments, lead agencies need only respond to significant environmental issues and do not need to provide all information requested by reviewers, as long as a good faith effort at full disclosure is made in the EIR.”

Pursuant to the CEQA Guidelines, an effect is not considered significant in the absence of substantial evidence; therefore, comments should be accompanied by factual support. Section 15204(c) of the CEQA Guidelines states:

“Reviewers should explain the basis for their comments, and should submit data or references offering facts, reasonable assumptions based on facts or expert opinion supported by facts in support of the comments. Pursuant to Section 15064 an effect shall not be considered significant in the absence of substantial evidence.”

1.8 Organization of the DSEIR

The DSEIR is organized by the following chapters:

- *Chapter 1: Introduction.* Chapter 1 describes the intended uses of this DSEIR, the environmental review approach, documents incorporated by reference, environmental review process, and document organization.
- *Chapter 2: Executive Summary.* Chapter 2 includes a summary of the proposed Project, environmental impacts and mitigation, areas of known controversy, and issues to be resolved in the DSEIR. A summary table is included presenting the summary of potential environmental impacts, their level of significance without mitigation measures, mitigation measures, and levels of significance with mitigation measures.

- *Chapter 3: Project Description.* Chapter 3 includes a description of the proposed Project background, project location, and existing conditions of the subject site. Chapter 3 also includes the project objectives, description of the project characteristics, and approvals and entitlements necessary to implement the proposed Project.
- *Chapter 4: Environmental Setting, Impact Analysis, and Mitigation Measures.* Chapter 4 describes the existing environmental setting, impacts and mitigation measures for specific areas identified by the County requiring environmental review.
- *Chapter 5: Other CEQA Considerations.* Chapter 5 discusses other CEQA issues, including growth inducing impacts, cumulative impacts, significant and unavoidable impacts on the environment, and significant irreversible environmental changes.
- *Chapter 6: Alternatives to the Proposed Project.* Chapter 6 describes the alternatives to the proposed Project, along with an analysis of the ability of the alternatives to meet the proposed Project objectives and associated environmental impacts.
- *Chapter 7: List of Preparers.* Chapter 7 contains a list of report authors and subconsultants.
- *Chapter 8: References.* Chapter 8 contains a list of documents referenced in the DSEIR.
- *Appendices.* The appendices include materials and studies that support the findings and conclusions presented in the DSEIR.

2.0 EXECUTIVE SUMMARY

2.1 Introduction

This Executive Summary section is provided in accordance with CEQA Guidelines §15123. As stated in the CEQA Guidelines §15123(a), “An EIR shall contain a brief summary of the proposed actions and its consequences. The language of the summary should be as clear and simple as reasonably practical.” CEQA Guidelines §15123 (b) states, the summary shall identify:

- Each significant effect with proposed mitigation measures and alternatives that would reduce or avoid that effect.
- Areas of controversy known to Lassen County including issues raised by agencies and the public.
- Issues to be resolved including the choice among alternatives and whether or how to mitigate the significant effects.

Accordingly, this summary includes a brief synopsis of the proposed Project and alternatives, environmental impacts and mitigation, areas of known controversy, and issues to be resolved in the DSEIR. Table 2-1, *Summary of Project Impacts and Mitigation Measures* (at the end of this section), presents the summary of potential environmental impacts, their level of significance without mitigation measures, mitigation measures, and levels of significance with mitigation measures.

2.1 Project Location

The Ward Lake Quarry is located within the community of Litchfield in Lassen County, California. The site is located approximately four miles east of the California State Correctional Center (CCC). The site lies on the southwest side of Shaffer Mountain at an elevation of approximately 4,500 feet above mean sea level (msl). The community of Litchfield is located three miles to the southeast and is generally shielded from the site by topography. The City of Susanville is located approximately 14 miles to the west.

2.1 Surrounding Land Use

Land uses adjacent to the current operation boundaries are defined by the *Lassen County General Plan* as “Agricultural Residential” to the west, “Extensive Agriculture” to the north, and “Open Space” to the south and the east. Existing zoning adjacent to the current operations is O-S (Open Space District) to the south and east, U-C-A-P (Upland Conservation/Agricultural Preserve Combining District) to the north, and U-C/A-2-20-A (Upland Conservation/Agricultural Residential/Building Site Combining/Agricultural District) to the west.

The General Plan land use designations for properties adjacent to the proposed expansion area are “Extensive Agriculture” to the west, “Open Space” to the north and east, and “Mountain Resort/Belfast Initiative Area” to the north and west. The zoning designations for the adjacent parcels are U-C (Upland Conservation District) to the west and O-S (Open Space) to the south, east, and north.

Twelve residences are located within one mile of the existing quarry. The nearest residence is located approximately 470 feet from the west property line of the quarry and was constructed in approximately 2007. The nearest residence to the proposed expansion area (the same home) is approximately 4,500 feet to the south.

2.3 General Plan and Zoning

The two proposed quarry expansion parcels (APN 109-100-059 and APN 109-100-060) are designated as “Extensive Agriculture” by the *Lassen County General Plan*. APN 109-100-059 is zoned U-C-2 (Upland Conservation Resource Management District), and APN 109-100-060 is zoned U-C-A-P (Upland Conservation/Agricultural Preserve Combining District).

2.4 Mine History

The Ward Lake Quarry has been operated since 1980, initially under a use permit issued to Caltrans. Caltrans had an agreement dated November 1979 with Miller’s Custom Work to use materials from the site. In 1981, Miller’s Custom Work applied for and was granted an expansion of the operation to include excavation and removal of rock over an 80-acre area and installation of a hot plant for asphaltic concrete processing. The road connecting Ward Lake Road to the site was also approved at this time. An Environmental Impact Report (EIR) was prepared for that project in May 1981.

In 1994, Miller’s Custom Work applied for an expansion of the 1981 permitted operation. An Initial Environmental Study/Mitigated Negative Declaration was prepared by Lassen County, the project was approved, and expanded operations began; however, a lawsuit was brought against the applicants and the County maintaining, among other items, that the Initial Environmental Study/Mitigated Negative Declaration were inadequate under CEQA and the concrete plant was not a permitted use in an area zoned U-C (Upland Conservation). The Lassen County Superior Court agreed, in part. Related to the inadequacy of the environmental review, the Initial Environmental Study/Mitigated Negative Declaration were found to be deficient in two areas – impacts to the deer and antelope herds and visual impacts. These two issues were the focus of an EIR which was prepared in June 1997.

During the 1997 amendment process, the quarry operator reduced the operating hours from 24 hours a day to between the hours of 6:00 a.m. and 7:00 p.m. The quarry previously operated as needed, 24 hours a day, seven days a week. TLT Enterprises, LLC acquired ownership of the quarry in 2011. The quarry was leased to Hat Creek Construction and Materials, Inc., which has operated it since that time.

Hat Creek Construction continued operating the Ward Lake Quarry under the original conditions outlined in Use Permit No. 96056 and previous Reclamation Plan No. 94032. In 2017, Hat Creek Construction filed an amendment to Use Permit 96065 to address changes to the operating conditions at the site. The Use Permit Amendment included:

- Modifying the operating hours to again allow for periods of 24-hour operations. This change was requested to respond to changes in State of California contracting practice requiring nighttime operation on Caltrans project to minimize daytime traffic impacts;
- Extending the life of the quarry from 2020 to 2030; and

- Increasing the annual volume to be mined per year to over 100,000 tons if responding to emergency situations.

A Subsequent EIR prepared for Use Permit Amendment No. 2018-003 was approved by the County on May 14, 2019. Although the Reclamation Plan for the site was not a primary issue and no reclamation plan amendment was submitted, the operating conditions at the site were incorporated by reference by the County into approval of Reclamation Plan Amendment No. 2018-001. No other portion of the Reclamation Plan was amended at that time.

Materials produced at the site include asphalt, concrete, various sizes of crushed rock and crushed base rock which are used as construction materials. The materials at the site have been evaluated by an independent testing laboratory and the California Department of Transportation (Caltrans) with test results indicating superior material not commonly found in the region. The quality of the resources and choice location to existing and potential market for aggregates and paving materials were the determining factors in choosing the site for the planned operations in 1981 (Miller's Custom Work, 1981).

2.5 Project Summary

The proposed Use Permit and Reclamation Plan Amendment (proposed Project) includes expansion of approximately 78.6 acres with an associated additional volume of 5,000,000 tons of material, extension of the life of the mine from 2030 to 2050, and increase in the maximum volume extracted per year from 100,000 tons to 200,000 tons. These amendments will allow the facility to continue to provide local construction materials in Lassen County.

The proposed Project includes the following modifications to existing permitted operations at the Ward Lake Quarry:

- Expansion of approximately 78.6 acres, with an associated additional volume of 5,000,000 tons of material.
- Extension of life of the mine from 2030 to 2050.
- Increase of maximum volume per year from 100,000 tons to 200,000 tons per year.

Mining of the proposed expansion area will commence upon approval of the Use Permit and Reclamation Plan Amendment. The expansion will follow the same operating procedures already approved for the current operations. Activities at the processing location will not change. The current mine face will be reclaimed as the expansion area is mined.

2.6 Project Objectives

The Project applicant has identified the following objectives for the proposed Project:

- Provide a local construction material supply to serve local and regional market demands.
- Provide a local source of materials for emergency jobs (during federal, State, or County declared emergencies) and other construction jobs requiring nighttime work.
- Extend the life of the quarry to extract additional superior materials from the site.

- Contribute to the improvement of the Lassen County economy by expanding an existing project that increases sales taxes.
- Expand an existing quarry operation without the need for either a County General Plan or Zone Amendment.

2.7 Project Alternatives

Section 15126(d) of the CEQA Guidelines mandates that all EIRs include a comparative evaluation of the proposed project with alternatives to the project that are capable of attaining most of the project's basic objectives but would avoid or substantially lessen any of the significant effects of the project. CEQA requires a "reasonable range" of alternatives, including the "no project" alternative. Chapter 6, *Alternatives*, of this DSEIR discusses each alternative in detail. The alternatives evaluated include:

Alternative 1 – No Project Alternative

The No Project Alternative includes the continuation of mining operations at the site as currently permitted under Use Permit No. 96056 and Use Permit Amendment No. 2018-003. Activities would continue to occur within the existing 160-acre mining boundary. Annual production would be limited to 100,000 tons except to supply emergency jobs. Mining activities would cease by the year 2030 and the mining area would be reclaimed.

Alternative 2 – Reduced Expansion Alternative

This alternative is similar to the proposed Project, but with a reduced expansion area and shorter mine life. As with the proposed Project, annual production would increase from 100,000 tons to 200,000 tons. The Reduced Expansion Alternative includes expansion of the mining area of the current operation to include an additional 26 acres. Due to the smaller expansion area, the life of the mine would be extended only 10 years. Mining would occur until 2040 and then the site would be reclaimed.

The location of the processing area of the operation would not change. Mining would occur as described for the proposed Project, but within the smaller expansion area. Mining activities in the expansion area would start immediately adjacent to the current mining area of the Project site and progress to the north. This alternative would require the same equipment operating at the same capacity as the proposed Project. The same average and maximum traffic volumes would be required to haul materials.

Environmentally Superior Alternative

The environmentally superior alternative is the one that would result in the fewest or least significant environmental impacts.

The Reduced Expansion Alternative would result in similar impacts as the proposed Project, but would reduce the area and time period over which impacts occur. The known cultural resource in the Project vicinity would be avoided in the smaller expansion area under the Reduced Expansion Alternative and no mitigation specific to the known cultural resource would be required. Impacts

to aesthetics and visual resources, biological resources, and geology and soils would be slightly reduced due to the smaller expansion area, but the level of significance of these impacts would not change. The mitigation measures required under the proposed Project would still be necessary for cultural and tribal cultural resources, geology, land use and air quality to reduce impacts of the Reduced Expansion Alternative to be less than significant. The mitigation measures included for biological resources will also be required to reduce impacts to biological resources, however impacts related to displacement of mule deer and pronghorn will remain significant and unavoidable. However, it should be noted that the Reduced Expansion Alternative would only partially meet the Project objectives of the Project since it would result in less overall material being provided by the operation and materials would be supplied for a shorter duration of time. The Reduced Expansion Alternative would leave up to 2,500,000 tons of superior material unavailable for use for local and regional projects that could be efficiently extracted and processed using the existing equipment and infrastructure currently at the Project site.

2.8 Environmental Impacts

Environmental Impacts Not Considered Further in this DSEIR

Section 15128 of the CEQA Guidelines states, “An EIR shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR. Such a statement may be contained in an attached copy of an Initial Study.”

An Initial Study for the proposed Project was not prepared by the County, however, information from prior EIRs conducted by the County for the Ward Lake Quarry have been reviewed and assessed to make the following no impact determinations.

- *Mineral Resources.* California’s Surface Mining and Reclamation Act of 1975 (SMARA) requires the State Geologist to classify land into mineral resource zones based on the known or inferred mineral resource potential of that land. The primary goal is to ensure that important mineral resources do not become inaccessible due to uniformed land-use decisions. To this end, the California Geological Survey performs objective mineral land classification (MLC) to assist in the protection and wise development of California’s mineral resources (California Department of Conservation, 2019). A search of the SMARA Mineral Lands Classification (MLC) data portal did not show any MLC related studies or maps for Lassen County or the proposed quarry expansion. There are no designated mineral deposits of regional or statewide importance within the proposed quarry expansion.

The State of California has not designated an area of statewide or regional mineral resource significance within the proposed quarry expansion. In addition, the proposed quarry expansion is not delineated in the *Lassen County General Plan* or *Standish-Litchfield Area Plan* as a locally important mineral resource. As a result, implementation of the proposed Project will not result in the loss of availability of a mineral resource of value to the region or residents of the state or delineated locally important mineral resource. Therefore, the proposed Project will have no impact to mineral resources.

- *Population and Housing.* No new development or infrastructure is proposed as part of the quarry expansion and no additional employees are anticipated. In addition, no existing housing or people will be displaced by the proposed Project. Therefore, implementation of the proposed Project will have no impact to population and housing.
- *Public Services.* The proposed Project includes expansion of an existing mining operation. As a result, Project implementation will not increase the local population that, in turn, would require new or physically altered schools, parks, or other public facilities. Additionally, the proposed Project will not result in an impact to service ratios, response time or other performance objectives for fire or police protection which would require the construction of new or physically altered governmental facilities. Therefore, implementation of the proposed Project will have no impact to public services.
- *Utilities and Service Systems.* Implementation of proposed Project will not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities that would result in significant environmental effects. The proposed quarry expansion will utilize the same utilities and services as the current mining operation. Additionally, the proposed Project does not include any changes that will affect solid waste at the site. Water used for dust suppression will be provided by an existing well. As discussed in Section 4.11, *Hydrology and Water Quality*, the proposed Project will not create a demand for water in excess of available groundwater supplies. Therefore, implementation of the proposed Project will not result in impacts related to utilities or service systems.
- *Recreation.* The proposed quarry expansion does not include recreational facilities and would have no foreseeable impact on existing recreational facilities; neither will the proposed Project increase the need for recreational services, as no additional employees are proposed. Therefore, implementation of the proposed Project will have no impact to recreational resources within the County.

The proposed Project will not result in impacts to these resources; therefore, impacts related to these resources are not further analyzed in this DSEIR.

Less Than Significant Impacts

The following subject areas have been identified as having a less than significant impact:

- Aesthetics and Visual Resources (Section 4.2)
- Agriculture and Forestry Resources (Section 4.3)
- Energy (Section 4.7)
- Greenhouse Gas Emissions (Section 4.9)
- Hazards and Hazardous Materials (Section 4.10)
- Hydrology and Water Quality (Section 4.11)
- Transportation (Section 4.14)
- Wildfire (Section 4.15)

Less Than Significant with Incorporation of Mitigation

The proposed Project would result in less than significant impacts with incorporation of mitigation measures on the following subject areas:

- Air Quality (Section 4.4)
- Biological Resources (Section 4.5)
- Cultural and Tribal Cultural Resources (Section 4.6)
- Geology and Soils (Section 4.8)
- Land Use and Planning (Section 4.12)
- Noise (Section 4.13)

Significant and Unavoidable Impacts

Section 15126(b) of the CEQA Guidelines requires an EIR to discuss the significant impacts of a proposed project that cannot be reduced to a less than significant level. These impacts are referred to as significant and unavoidable impacts of the project. In Sections 4.2 through 4.15 of this DSEIR, the issue areas were analyzed to determine whether Project implementation would result in a significant adverse environmental impact. Based on the analyses given in these sections, the following environmental impacts were determined to be significant and unavoidable impacts:

Biological Resources

Expansion of the mining area by an additional 78.6 acres will increase the area over which light and noise impacts will occur causing additional displacement of mule deer and American pronghorn from noise and human activity. As discussed in the 1997 Deer Impact Analysis, human activity in the Project area would displace animals escaping mid-winter snow as well as taking advantage of late-winter and early spring plant phenology or the spring green-up due to noise and activity at the site. The proposed Project will result in these impacts occurring over a larger area than the current mining operation and for a longer duration (until 2050).

The Project will continue to comply with the conditions of approval for Use Permit Amendment No. 2018-003 limiting mining activities from January 1st to March 31st each year, limiting activities occurring during nighttime hours, as well as requiring lighting to be downward facing and fully-shielded. These operating conditions will decrease the lighting and noise impacts within the expansion area. However, as discussed in previous CEQA review for the Project, a seasonal closure from at least December through March was determined to be necessary to reduce the impacts due to displacement from noise and human activity to a less than significant level. The Project will result in additional disturbance to pronghorn and mule deer. Human disturbance during a time of particular nutritional stress may effectively remove a portion of their winter range (Kucera, 1996). Because several hundred deer would potentially be affected and impacts will last for an additional 30 years (until 2050), this would be a significant environmental impact.

Adherence to Mitigation Measure 4.5-7 and Mitigation Measure 4.5-8 contained in Section 4.5, *Biological Resources*, of the DSEIR) for the current operation will reduce displacement impacts to American pronghorn and mule deer; however, this impact will remain significant and unavoidable. No additional mitigation measures are available for this impact. This is considered significant and

unavoidable. An increased closure season of all operations onsite was determined to be economically infeasible. In 1997, the Lassen County Planning Commission recommended that the Lassen County Board of Supervisors amend the season of restricted operations due to economic infeasibility of a four-month closure. Economic losses said to potentially result from the four-month annual closure would impact the mine as well as the surrounding community; a disruption of mining operations would lead to a loss of employee payroll, place a higher demand on social services in the community, and reduce availability of mined materials in the surrounding area. An increased closure season of all operations onsite has been determined to be economically infeasible.

Significant Cumulative Impacts

According to §15355 of the CEQA Guidelines, the term cumulative impacts “...refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” Individual effects that may contribute to a cumulative impact may be from a single project or a number of separate projects. Individually, the impacts of a project may be relatively minor, but when considered along with impacts of other closely related or nearby projects, including newly proposed projects, the effects could be cumulatively considerable.

This DSEIR has considered the potential cumulative effects of the proposed Project along with other current and reasonably foreseeable projects. Impacts for the following issue areas have been found to be cumulatively significant:

Biological Resources

Impacts to mule deer and antelope include direct habitat loss and displacement from human disturbance. The temporary loss of 78.6 acres of habitat was determined to be less than significant at the Project level. The loss of winter habitat resulting from the Project is cumulatively considerable in combination with the 160 acres of habitat loss from the current Ward Lake Quarry operation and additional direct habitat loss of mining activities on BLM property south of the Project site. The habitat disturbed by the existing operations and proposed expansion area will be restored in accordance with the Reclamation Plan Amendment and habitat will be enhanced following the conclusion of mining; therefore, cumulative impacts related to direct antelope and mule deer habitat loss will be less than significant.

Displacement due to human disturbance of mule deer and antelope from important winter habitat was determined to be significant and unavoidable at the Project-level since displacement impacts occur over a larger area than direct habitat loss. This impact is cumulatively considerable in combination with the existing mining operation as well as the nearby BLM pit. The proposed Project combined with the existing mining operations in the Project vicinity will result in a significant and unavoidable cumulative impact related to the displacement of mule deer and antelope from winter habitat.

2.9 Areas of Controversy, Issues Raised, and Areas Resolved in the DSEIR

As required by CEQA Guidelines §15082, the County issued a Notice of Preparation (NOP) on April 28, 2021 that summarized the proposed Project, stated its intention to prepare an EIR, and requested comments regarding the scope and content of the EIR from responsible and trustee agencies. Comments received include those received during early consultation as well as in response to the NOP for the proposed Project. The following comments letters were received (refer to Appendix A):

- California Department of Conservation, Division of Mine Reclamation (May 12, 2021).
- California Department of Fish and Wildlife (May 26, 2021).
- Native American Heritage Commission (April 28, 2021).

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain issues to be resolved, which includes the choice among alternatives and whether or how to mitigate significant impacts. The following major issues are to be resolved:

- Determine whether the DSEIR adequately describes the environmental impacts of the proposed Project;
- Choose among alternatives;
- Determine whether the recommended mitigation measures should be adopted or modified; and
- Determine whether additional mitigation measures need to be applied to the proposed Project.

2.10 Summary of Environmental Impacts and Mitigation Measures

Under CEQA, a significant effect on the environment is defined as a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. For these areas, this DSEIR discusses the impacts and mitigation measures that could be implemented by Lassen County to reduce potential adverse impacts to a level that is considered less than significant. An impact that remains significant after mitigation is considered an unavoidable adverse impact of the proposed Project. The mitigation measures presented in the DSEIR will form the basis of the *Mitigation Monitoring and Reporting Program*. Table 2-1, *Summary of Project Impacts and Mitigation Measures*, provides a summary of the environmental effects of the proposed Project identified in each technical issue chapter. The table consists of the environmental impacts, the significance of the impacts for the Project, the proposed mitigation measures, and the significance of the impacts after the mitigation measures are implemented.

**Table 2-1
SUMMARY OF PROJECT IMPACTS AND MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
4.2 AESTHETIC AND VISUAL RESOURCES			
<i>Impact 4.2-1: Have a substantial adverse effect on a scenic vista.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>Impact 4.2-2: In non-urbanized areas, substantially degrade the existing visual character or quality of the public views of the site and its surroundings.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>Impact 4.2-3: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
4.3 AGRICULTURE AND FORESTRY RESOURCES			
<i>Impact 4.3-1: 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 (FMMP) of the California Resources Agency, to non-agricultural use.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>Impact 4.3-2: Involve other changes in the existing environment that, due to their location or nature, could result in conversion of farmland to nonagricultural use.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
4.4 AIR QUALITY			
<i>Impact 4.4-1: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard. .</i>	Potentially Significant	MM 4.4-1: The Project applicant shall ensure compliance with Lassen County APCD rules for fugitive dust emissions. Based on Lassen County APCD Rule 4:18 (Fugitive Dust Emissions), reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including, but not limited to, the following provisions: <ul style="list-style-type: none"> • <i>Cover trucks.</i> Covering open bodied trucks when used for transportation materials likely to give rise to airborne dust. • <i>Filter and containment.</i> Installation and use of hoods, fans, and other fabric filters to enclose and vent the handling of dusty materials. Containment methods may be employed during sandblasting and other similar operations. • <i>Dust suppression.</i> The application of asphalt, oil, water or suitable chemicals to dirt roads, material stockpiles, land 	Less than Significant

**Table 2-1
SUMMARY OF PROJECT IMPACTS AND MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		clearing, excavation, grading or other surfaces which can give rise to airborne dusts. <ul style="list-style-type: none"> • <i>Good housekeeping.</i> The prompt removal of earth or other material from paved streets onto which earth or other material for earth moving equipment, erosion by water, or other means has been deposited. 	
<i>Impact 4.4-2: Expose sensitive receptors to substantial pollutant concentrations.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>Impact 4.4-3: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
4.5 BIOLOGICAL RESOURCES			
<i>Impact 4.5-1: 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 DFG or U.S. Fish and Wildlife Service (USFWS).</i>	Potentially Significant	MM 4.5-1: To avoid impacts on burrowing owls and other nesting birds, including raptors protected under State and federal regulations, the following shall be implemented (removal of raptor nests at any time of year is prohibited unless appropriate permits are obtained). a. <u>Burrowing owls.</u> A qualified biologist shall conduct preconstruction surveys for burrowing owls in accordance with the <i>Staff Report on Burrowing Owl Mitigation</i> prepared by the California Department of Fish and Game (CDFW) (March 7, 2012). Upon completion, all survey results shall be submitted to Lassen County. Where physical or visual access is available, survey coverage shall extend 500 feet around the project site where suitable habitat for burrowing owls is present. A minimum of four field	Less than Significant

**Table 2-1
SUMMARY OF PROJECT IMPACTS AND MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>surveys shall be conducted: at least one between February 15th and April 15th; and a minimum of three surveys, at least three weeks apart, between April 15th and July 15th, with at least one survey after June 15th. Survey methods and survey reports shall be in accordance with the CDFW Staff Report and provided to Lassen County. If no active burrows are observed, the site shall be reinspected by a qualified biologist no more than one week prior to initiation of construction to ensure that owls are not present.</p> <p>If an active burrow is observed in the project site, the County shall consult with CDFW regarding establishing a non-disturbance buffer around the burrow, or implementing passive relocation methods to exclude the owls from the site prior to commencement of construction. No burrowing owls shall be excluded from occupied burrows until a burrowing owl exclusion and relocation plan is approved by CDFW. Following owl exclusion and burrow demolition, the site shall be monitored by a qualified biologist to ensure burrowing owls do not reoccupy the site prior to construction.</p> <p>In the event of loss of burrowing owl nests, a mitigation and monitoring plan shall be prepared by a qualified biologist to identify methods to offset the loss at a minimum 1:1 ratio (e.g., establishing a</p>	

**Table 2-1
SUMMARY OF PROJECT IMPACTS AND MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>permanent conservation easement to provide for burrowing owl nesting, foraging, wintering, and dispersal, including completing habitat enhancements within the conservation easement area as necessary. The mitigation and monitoring plan shall be approved by CDFW prior to commencement of construction.</p> <p>b. <u>For all other bird species</u>, if vegetation removal or ground disturbance activities occur between February 1st and August 31st, a pre-construction nesting survey shall be conducted by a qualified biologist to identify active nests in and adjacent to the work area. Surveys shall begin prior to sunrise and continue until vegetation and nests have been sufficiently observed. The survey shall consider acoustic impacts and line-of-sight disturbances occurring as a result of the project in order to determine a sufficient survey radius to avoid nesting birds. At a minimum, the survey report shall include a description of the area surveyed, date and time of the survey, ambient conditions, bird species observed in the area, a description of any active nests observed, any evidence of breeding behaviors (e.g., courtship, carrying nest materials or food, etc.), and a description of any outstanding conditions that may have impacted the survey results (e.g., weather conditions, excess noise, the presence of predators, etc.). The survey shall be conducted no</p>	

**Table 2-1
SUMMARY OF PROJECT IMPACTS AND MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>more than one week prior to the initiation of construction. If construction activities are delayed or suspended for more than one week after the pre-construction survey, the site shall be resurveyed. Upon completion, all survey results shall be submitted to Lassen County.</p> <p>If active nests are found, appropriate actions shall be implemented to ensure compliance with the Migratory Bird Treaty Act and California Fish and Game Code. Compliance measures may include, but are not limited to, exclusion buffers, sound-attenuation measures, seasonal work closures based on the known biology and life history of the species identified in the survey, as well as ongoing monitoring by biologists.</p> <p>MM 4.5-2: Throughout the life of the mine, if milkweed (<i>Asclepias</i> spp.) is observed onsite during the breeding season/pupae development season (spring-summer) for the monarch butterfly, the plant shall be inspected for caterpillars by a qualified biologist. If developing monarch caterpillars are present, the plant shall be avoided until butterflies have emerged and the plant is no longer in use.</p> <p>MM 4.5-3: Prior to new ground disturbance and annually thereafter, a pre-construction survey shall be conducted by a qualified biologist to determine the presence of pygmy rabbits, white-tailed jackrabbits, and</p>	

**Table 2-1
SUMMARY OF PROJECT IMPACTS AND MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>other special-status wildlife species that may be present onsite. If special-status animal species are identified within the project site, a qualified biologist, in consultation with the California Department of Fish and Wildlife, shall recommend avoidance measures for protection of the species. Upon completion, all survey results shall be submitted to Lassen County.</p> <p>MM 4.5-4: Prior to new ground disturbance, a qualified biologist shall conduct a survey in areas that contain rock outcrops or other potentially suitable roosting habitat for pallid bats. If an active maternity roost is present, a qualified biologist, in consultation with the California Department of Fish and Wildlife, shall establish a suitable buffer zone to ensure that active bat nurseries are not adversely affected. If non-breeding bats are found in rock outcrops within the disturbance footprint, the individuals shall be safely evicted under the direction of a qualified biologist. Upon completion, all survey results shall be submitted to Lassen County.</p> <p>MM 4.5-5: Prior to new ground disturbance and annually thereafter, a botanical survey shall be conducted during the blooming season when special-status plants known to occur in the region would be identifiable. If special-status plants are present, a suitable buffer zone(s) shall be determined by a qualified biologist in consultation with the California Department of Fish and Wildlife (CDFW) and exclusionary fencing shall be</p>	

**Table 2-1
SUMMARY OF PROJECT IMPACTS AND MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>placed prior to commencement of earth-disturbing activities. Upon completion, all survey results shall be submitted to Lassen County.</p> <p>If avoidance is not possible, CDFW shall be contacted to determine a satisfactory method of mitigation. Mitigation shall be undertaken concurrently with or in advance of the earth-disturbing activities.</p> <p>MM 4.5-6: All construction personnel participating in earth-disturbing activities and their supervisors shall receive training by a qualified biologist regarding protective measures for special-status plant and animal species and sensitive habitats that could exist in the study area. When new personnel are hired, the proof that they receive the mandatory training shall be submitted to Lassen County before starting work. At a minimum, the training shall include the following:</p> <ul style="list-style-type: none"> a. A review of the special-status species that could occur in the project site, the locations where the species could occur, the laws and regulations that protect these species, and the consequences of noncompliance with those laws and regulations. b. Procedures to be implemented in the event that these species are encountered during construction. c. A review of sensitive habitats that occur in the study area and the location of the sensitive habitats. 	

**Table 2-1
SUMMARY OF PROJECT IMPACTS AND MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>d. A review of applicable mitigation measures, standard construction measures, best management practices, and resource-agency permit conditions that apply to the protection of special-status species and sensitive habitats.</p> <p>MM 4.5-7: To minimize impacts from the loss of wildlife habitat, site disturbance in the expansion area shall not exceed two 5-acre increments, starting excavation on another 5-acre increment while concurrently reclaiming the first 5-acre increment. After the initial excavation of two 5-acre increments, disturbance shall not exceed 5-acres. At any given time. Reclamation in the expansion area shall be completed concurrently with mining operations in accordance with the adopted Reclamation Plan. Reclamation, including seeding, must commence within two years following completion of mining in each five-acre area in order to minimize the total area disturbed at any given time and to allow for restoration of the vegetative cover.</p> <p>MM 4.5-8: To ensure no additional foraging habitat loss, all remaining areas of the mine parcels shall remain undisturbed for the duration of mining. This includes the remaining portions of Lassen County Assessor's Parcel Number (APN) 109-100-059 and APN 109-100-060 (i.e., all portions of the parcels outside of the reclamation boundary for the current mine operation (as of 2021) and the proposed 2021 mine expansion boundary).</p>	

**Table 2-1
SUMMARY OF PROJECT IMPACTS AND MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<i>Impact 4.5-2: 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.</i>	Potentially Significant	<p>MM 4.5-9: <i>Limits on Operation.</i> The operator shall continue limits on operations from January 1st to March 31st. Impacts can be lessened through continuing seasonal operating restrictions included in the Condition of Approval for Use Permit No. 96056: <i>Except in a state of emergency, as declared by the local Emergency Services Director and/ or the Board of Supervisors and/ or the City of Susanville, no grading, excavating, or blasting on the site shall be allowed between January 1st and March 31st Annually.</i></p> <p>MM 4.5-10: <i>Operating Conditions of Use Permit No. 2018-003.</i> The operator shall continue the Conditions of Approval for Use Permit Amendment No. 2018-003. Impacts can be lessened with the seasonal operating restrictions and light and noise reductions included in the Conditions of Approval for Use Permit Amendment No. 2018-003.</p>	Significant and Unavoidable
4.6 CULTURAL AND TRIBAL CULTURAL RESOURCES			
<i>Impact 4.6-1: The Project would cause a substantial adverse change in the significance of a historical or archaeological resource pursuant to §15064.5.</i>	Potentially Significant	<p>MM 4.6-1: Prior to ground disturbing activities with the expansion area, a non-disturbance area for WARD-PRE-01 shall be defined and marked by a qualified archaeologist. Once the non-disturbance area is delineated, one of the following options shall be implemented by the Project proponent:</p> <ul style="list-style-type: none"> • <i>Resource Avoidance.</i> The Project shall be redesigned to avoid all ground disturbances within the established non-disturbance area and long-term access restrictions shall be established (fencing 	Less than Significant

**Table 2-1
SUMMARY OF PROJECT IMPACTS AND MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>or deed restrictions) to preclude disturbance to the resource.</p> <ul style="list-style-type: none"> • <i>Evaluation and Data Recovery.</i> WARD-PRE-01 shall be evaluated for eligibility for inclusion in the CRHR by a qualified archaeologist. The results of the evaluation shall be submitted to Lassen County. If the evaluation is negative (i.e., not historically significant), no further mitigation is required. If the property is found to be an historical resource and data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provisions for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken. The study shall be deposited with the California Historical Resources' Regional Information Center. <p>MM 4.6-2: <i>Inadvertent Discovery of Cultural Resources.</i> If subsurface deposits believed to be cultural or human in origin are discovered during construction, then all work must halt within a 50-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. If the professional</p>	

**Table 2-1
SUMMARY OF PROJECT IMPACTS AND MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		archaeologist determines that the find does not represent a cultural resource, then work may resume immediately, and no agency notifications are required. If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, then he or she shall immediately notify the County, which shall consult on a finding of eligibility and implement appropriate treatment measures, if the find is determined to be eligible for inclusion in the NRHP or CRHR. Work cannot resume within the no-work radius until the County, through consultation as appropriate, determines that the site either: 1) is not eligible for the NRHP or CRHR; or 2) that the treatment measures have been completed to its satisfaction.	
<i>Impact 4.6-2: The Project would disturb human remains, including those interred outside of formal cemeteries.</i>	Potentially Significant	MM 4.6-3: <i>Unanticipated Discovery of Human Remains</i> . In the event of the discovery of human remains, or remains that are potentially human, the contractor shall ensure reasonable protection measures are taken to protect the discovery from disturbance (Assembly Bill [AB] 2641). The archaeologist shall notify the Lassen County Coroner (as per §7050.5 of the Health and Safety Code). The provisions of §7050.5 of the California Health and Safety Code, §5097.98 of the California PRC, and AB 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the project (§5097.98 of the PRC). The designated	Less than Significant

<p>Table 2-1 SUMMARY OF PROJECT IMPACTS AND MITIGATION MEASURES</p>			
Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, then the NAHC can mediate (§5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work cannot resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.	
<i>Impact 4.6-3: The Project would Cause a substantial adverse change in the significance of a tribal cultural resource.</i>	Potentially Significant	See Mitigation Measures 4.6-1, 4.6-2, and 4.6-3.	Less than Significant
4.7 ENERGY			
<i>Impact 4.7-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>Impact 4.7-2: Conflict or obstruct a state or local plan for renewable energy or energy standards.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
4.8 GEOLOGY AND SOILS			
<i>Impact 4.8-1: Expose people or structures to potential substantial adverse effects, including risk of loss, injury, or death involving:</i>			
<i>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?</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>ii) Strong seismic ground shaking?</i>	Less than Significant	No mitigation measures are required.	Less than Significant

Table 2-1 SUMMARY OF PROJECT IMPACTS AND MITIGATION MEASURES			
Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<i>iii) Seismic-related ground failure, including liquefaction?</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>iv) Landslides?</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>Impact 4.8-2: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</i>	Potentially Significant	MM 4.8-1: <i>Avoid and Minimize Impacts to Paleontological Resources.</i> Should any potentially unique paleontological resources (fossils) be encountered during development activities, work shall be suspended, and the County shall be immediately notified. At that time, the County will coordinate any necessary investigation of the discovery with a qualified paleontologist. The project proponent shall be required to implement mitigation necessary for the protection of paleontological resources. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures.	Less than Significant
4.9 GREENHOUSE GAS EMISSIONS			
<i>Impact 4.9-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>Impact 4.9-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
4.10 HAZARDS AND HAZARDOUS MATERIALS			
<i>Impact 4.10-1: Create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials or through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>Impact 4.10-2: Expose people or structures to a significant risk of loss, injury or death involving wildland fires.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
4.11 HYDROLOGY AND WATER QUALITY			
<i>Impact 4.11-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>Impact 4.11-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater</i>	Less than Significant	No mitigation measures are required.	Less than Significant

<p>Table 2-1 SUMMARY OF PROJECT IMPACTS AND MITIGATION MEASURES</p>			
Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<i>management of the basin.</i>			
<i>Impact 4.11-3: 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 addition of impervious surfaces, in a manner which would: i) result in substantial erosion or siltation on- or off-site; ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or offsite; or 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.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>Impact 4.11-4: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
4.12 LAND USE AND PLANNING			
<i>Impact 4.12-1: Conflict with Lassen County General Plan or Standish-Litchfield Area Plan.</i>	Potentially Significant	See Mitigation Measure 4.5-1 through 4.5-8.	Less than Significant
4.13 NOISE			
<i>Impact 4.13-1: Result in substantial temporary or permanent increase in ambient noise levels in excess of standards established in the Lassen County General Plan.</i>	Potentially Significant	<p>MM 4.13-1: <i>Materials Haul Truck Operations.</i> To maintain traffic noise below 65 dB Ldn, the operator shall continue to comply with Condition of Approval #8 of Use Permit Amendment No. 2018-003 which limits truck trips to an average of 26 round trips (26 arriving and 26 departing) throughout the calendar year and a daily maximum of 275 round trips (275 arriving and 275 departing).</p> <p>MM 4.13-2: <i>Material Haul Truck Counts.</i> Prior to commencement of mining activities within the quarry expansion area, the mine operator shall install pneumatic road tubes or other similar methods to quantify daily truck trips in an effort to ensure that annual truck counts do not exceed limitations imposed by Condition of Approval #8 of Use Permit Amendment No. 2018-003. Results of the counts shall be provided to the County on an annual basis (January 1st</p>	Less than Significant

Table 2-1 SUMMARY OF PROJECT IMPACTS AND MITIGATION MEASURES			
Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		of each year) throughout the duration of mining activities.	
<i>Impact 4.13-2: Result in the generation of excessive groundborne vibration or groundborne noise levels.</i>	Potentially Significant	<p>MM 4.13-3: <i>Plant and Expansion Area Operations.</i> The following measures shall be implemented:</p> <ul style="list-style-type: none"> • Restrict crushing operations to the daytime hours of 7:00 a.m. to 10:00 p.m. • The operator shall continue to limit winter operation (no grading, excavating, or blasting per Resolution No. 97-067, Condition #21). • The operator shall limit 24-hour operations to April 1st to December 31st annually. • The operator shall not grade or excavate between 7:00 p.m. and 7:00 a.m. or blast between 6:00 p.m. and 7:00 a.m. 	Less than Significant
4.14 TRANSPORTATION			
<i>Impact 4.14-1: Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).</i>	Less than Significant	No mitigation measures are required.	Less than Significant
4.15 WILDFIRE			
<i>Impact 4.15-1: The Project could substantially impair an Adopted Emergency Response Plan or Emergency Evacuation Plan.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>Impact 4.15-2: Due to Slope, Prevailing Winds, and Other Factors, the Project could Exacerbate Wildfire Risks, and thereby Expose Project Occupants to Pollutant Concentrations from a Wildfire or the Uncontrolled Spread of Wildfire.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>Impact 4.15-3: 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.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>Impact 4.15-4: 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.</i>	Less than Significant	No mitigation measures are required.	Less than Significant

Table 2-1 SUMMARY OF PROJECT IMPACTS AND MITIGATION MEASURES			
Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
CUMULATIVE IMPACTS			
Aesthetics and Visual Resources			
<i>Have a substantial adverse effect on a scenic vista.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>In non-urbanized areas, substantially degrade the existing visual character or quality of the public views of the site and its surroundings.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
Agriculture and Forestry Resources			
<i>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.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>Involve other changes in the existing environment that, due to their location or nature, could result in conversion of farmland to nonagricultural use.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard.</i>	Potentially Significant	See Mitigation Measure 4.4-1	Less than Significant
<i>Expose sensitive receptors to substantial cumulative pollutant concentrations.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
Biological Resources			
<i>Have a substantial cumulative 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 DFG or U.S. Fish and Wildlife Service (USFWS).</i>	Potentially Significant	See Mitigation Measure 4.5-1 through 4.5-8.	Less than Significant
<i>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.</i>	Potentially Significant	See Mitigation Measure 4.5-1 through 4.5-10.	Significant and Unavoidable
Cultural Resources and Tribal Cultural Resources			
<i>The Project would cause a substantial adverse change in the significance of a historical or archaeological resource pursuant to §15064.5.</i>	Potentially Significant	See Mitigation Measure 4.6-1.	Less than Significant
<i>The Project would disturb human remains, including those interred outside of formal cemeteries.</i>	Potentially Significant	See Mitigation Measure 4.6-2.	Less than Significant
<i>The Project would cause a substantial adverse change in the significance of a tribal cultural resource.</i>	Potentially Significant	See Mitigation Measure 4.6-1 and 4.6-2.	Less than Significant

<p>Table 2-1 SUMMARY OF PROJECT IMPACTS AND MITIGATION MEASURES</p>			
Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Energy			
<i>Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>Conflict or obstruct a state or local plan for renewable energy or energy standards.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
Geology and Soils			
<i>Expose people or structures to potential substantial adverse effects, including 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; ii) Strong seismic ground shaking; iii) Seismic-related ground failure, including liquefaction; or iv) Landslides.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</i>	Potentially Significant	See Mitigation Measure 4.8-1.	Less than Significant
Greenhouse Gas Emissions			
<i>Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
Hazards and Hazardous Materials			
<i>Create a cumulative a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials or through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>Expose people or structures to a significant cumulative risk of loss, injury or death involving wildland fires.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
Hydrology and Water Quality			
<i>Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.</i>	Less than Significant	No mitigation measures are required.	Less than significant
<i>Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>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 addition of impervious surfaces in a manner which would result in substantial erosion or siltation on-or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or offsite; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted</i>	Less than Significant	No mitigation measures are required.	Less than Significant

Table 2-1 SUMMARY OF PROJECT IMPACTS AND MITIGATION MEASURES			
Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<i>runoff; or impede or re-direct flood flows.</i>			
<i>Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
Land Use			
<i>Conflict with Lassen County General Plan or Standish-Litchfield Area Plan.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
Noise			
<i>Result in substantial temporary or permanent increase in ambient noise levels in excess of standards established in the Lassen County General Plan.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>Result in the exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
Transportation			
<i>Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).</i>	Less than Significant	No mitigation measures are required.	Less than Significant
Wildfire			
<i>The Project Could Substantially Impair an Adopted Emergency Response Plan or Emergency Evacuation Plan.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>Due to Slope, Prevailing Winds, and Other Factors, the Project Could Exacerbate Wildfire Risks, and Thereby Expose Project Occupants to, Pollutant Concentrations from a Wildfire or the Uncontrolled Spread of Wildfire.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>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.</i>	Less than Significant	No mitigation measures are required.	Less than Significant
<i>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.</i>	Less than Significant	No mitigation measures are required.	Less than Significant

3.0 PROJECT DESCRIPTION

The purpose of this section is to describe the proposed Project in a useful and comprehensible manner to the public, other organizations, agencies, and decision-makers. CEQA Guidelines §15124 requires a project description to contain:

- A regional map showing the location of the project and a detailed map showing the precise location and boundaries of the project;
- A statement of objectives sought by the project, including the underlying purpose of the project;
- A general description of the project's technical, economic, and environmental characteristics; and
- A statement briefly describing the intended uses of the Environmental Impact Report (EIR), including a list of agencies that are expected to use the EIR in their decision-making, a list of permits and other approvals required to implement the project, and a list of related environmental review and consultation requirements required by federal, State, and local laws, regulations, or policies.

Under CEQA, the Project Description is required to provide general information but not an engineering level of detail. The CEQA Guidelines provide: "The description of the project shall contain the following information but should not supply extensive detail beyond that needed for evaluation and review of the environmental impact.

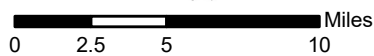
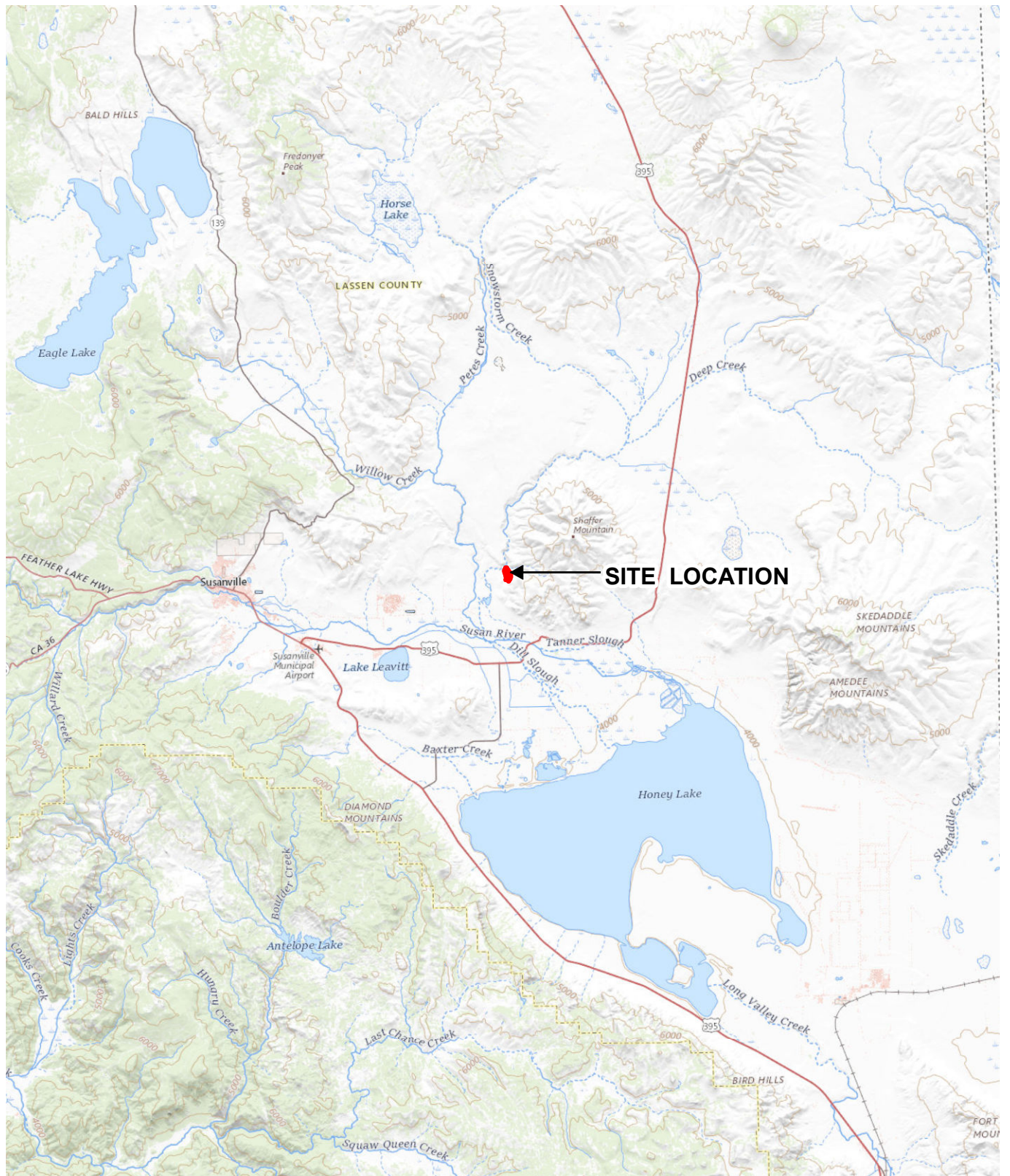
- A general description of the project's technical, economic, and environmental characteristics, considering the principal engineering proposals if any and supporting public service facilities." (CEQA Guidelines §15124[c].)

The information provided in this DSEIR section meets the requirements §15124 of the CEQA Guidelines, and provides a level of detail adequate for public, other organization and agency review and consideration of the proposed Project and the potential environmental impacts associated with Project implementation.

3.1 Site Location

The Ward Lake Quarry is located approximately three miles east of Ward Lake off of Ward Lake Road in Lassen County, approximately four miles east of the California Correctional Center (CCC). The community of Litchfield is located three miles to the southeast and is generally shielded from the site by topography. The City of Susanville is located approximately 14 miles to the west. The quarry is located in Section 32, Township 30 North, Range 14 East, Mount Diablo Base Meridian (MDBM). The latitude and longitude at the center of the site are 40° 24' 52.12' and 120° 25' 2.07', respectively. The general site location is illustrated on Figure 3-1.

Use Permit Amendment No. 2021-003 and Reclamation Plan Amendment No. 2021-001 address changes to the current operation within portions of APN 109-100-059 (historically, APN 109-100-040) and APN 109-100-060 (historically, APN 109-100-042). TNT Enterprises also owns APN 109-100-29, but no mining or other activities are proposed on this parcel.



**FIGURE 3-1
GENERAL SITE LOCATION
WARD LAKE QUARRY
LASSEN COUNTY, CALIFORNIA**

The Project site includes the existing mining boundary as well as the proposed 78.6-acre expansion area located to the north of the existing mining boundary. The total parcel size of APN 109-100-059 is 442 acres, and the total parcel size of APN 109-100-060 is 240 acres. Parcel boundaries are illustrated on Figure 3-2.

The currently disturbed area under Use Permit No. 2018-003 is approximately 138 acres. The Reclamation Plan Amendment adds an expansion of approximately 78.6 acres. The new total area of the mine is approximately 216.6 acres. Parcel boundaries are shown on Figure 3-2. Project site layout is included as Figure 3-3.

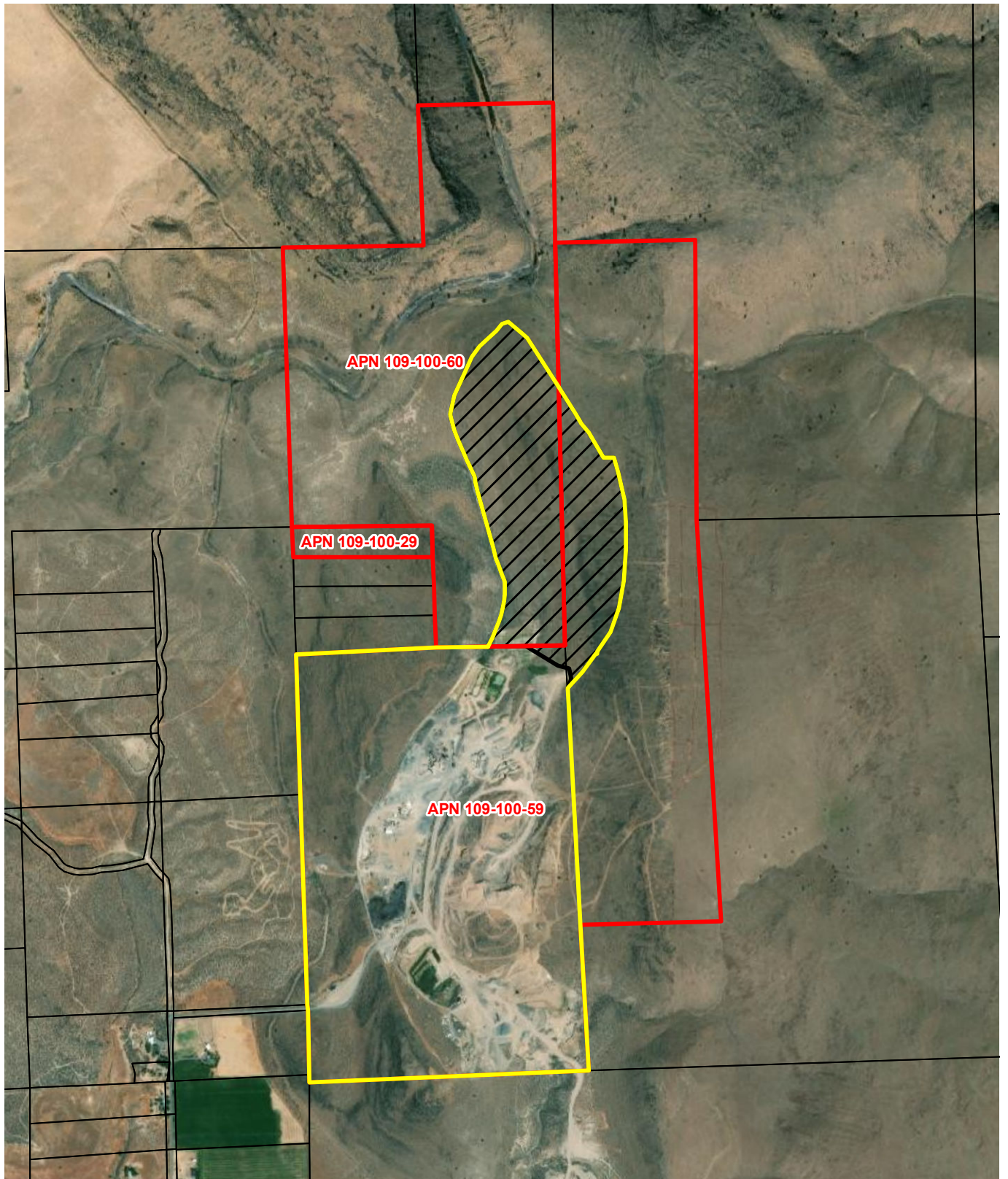
3.2 Project Background

Mining on the Project site began at a small scale in 1980 under a use permit issued to Caltrans. Caltrans had an agreement dated November 1979 with Miller's Custom Work to use materials from the site. In 1981, Miller's Custom Work applied for and was granted an expansion of the operation to include excavation and removal of rock over an 80-acre area and installation of a hot plant for asphaltic concrete processing. The road connecting Ward Lake Road to the site was also approved at this time. An EIR was prepared for that project in May 1981 (SCH No. 80062304).

In 1994, Miller's Custom Work applied for an expansion of the 1981 permitted operation. An Initial Environmental Study/Mitigated Negative Declaration was prepared by the County, the project was approved, and expanded operations began. However, a lawsuit was brought against the applicants and the County by the Maidu Nation and Everd and Iona McCain maintaining, among other items, that the Initial Environmental Study and Mitigated Negative Declaration were inadequate under CEQA and the concrete plant was not a permitted use in an area zoned U-C or Upland Conservation. The Lassen County Superior Court agreed, in part. Related to the inadequacy of the environmental review, the Initial Study and Mitigated Negative Declaration were found to be deficient in two areas: 1) impacts to the deer, and 2) antelope herds and visual impacts. These two issues were the focus of an EIR which was prepared in June 1997. The amendments to the use permit covered in the 1997 EIR included:

- The rezoning of the parcel from U-C (Upland Conservation) to U-C-2 (Upland Conservation/Resource Management District) to allow operation of a ready-mix concrete plant (already onsite and operating within limits imposed by the Superior Court).
- Onsite production of ready-mix concrete added to the use permit as an allowed use.
- Increase in the height of the exposed rock quarry face from the existing +/- 84 feet to a maximum of 150 feet with associated increase in harvest volume from 500,000 cubic yards (cy) to 1,700,000 cy.
- Expansion of the season of operation from seven months (April through October) to year-round as weather permits.

The previous Reclamation Plan was approved for the mining operation, which includes regrading of slopes to no greater than 2H:1V, benching of the quarry face, and revegetation with native plants. During the 1997 amendment process, the quarry operator reduced the operating hours from 24 hours a day to from 6:00 a.m. to 7:00 p.m. The quarry previously operated as needed, 24 hours a day, seven days a week.



- Project Site
- Approximate Parcel Boundary
- Proposed Expansion Area

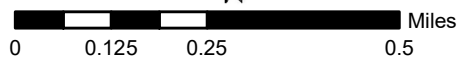
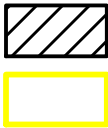
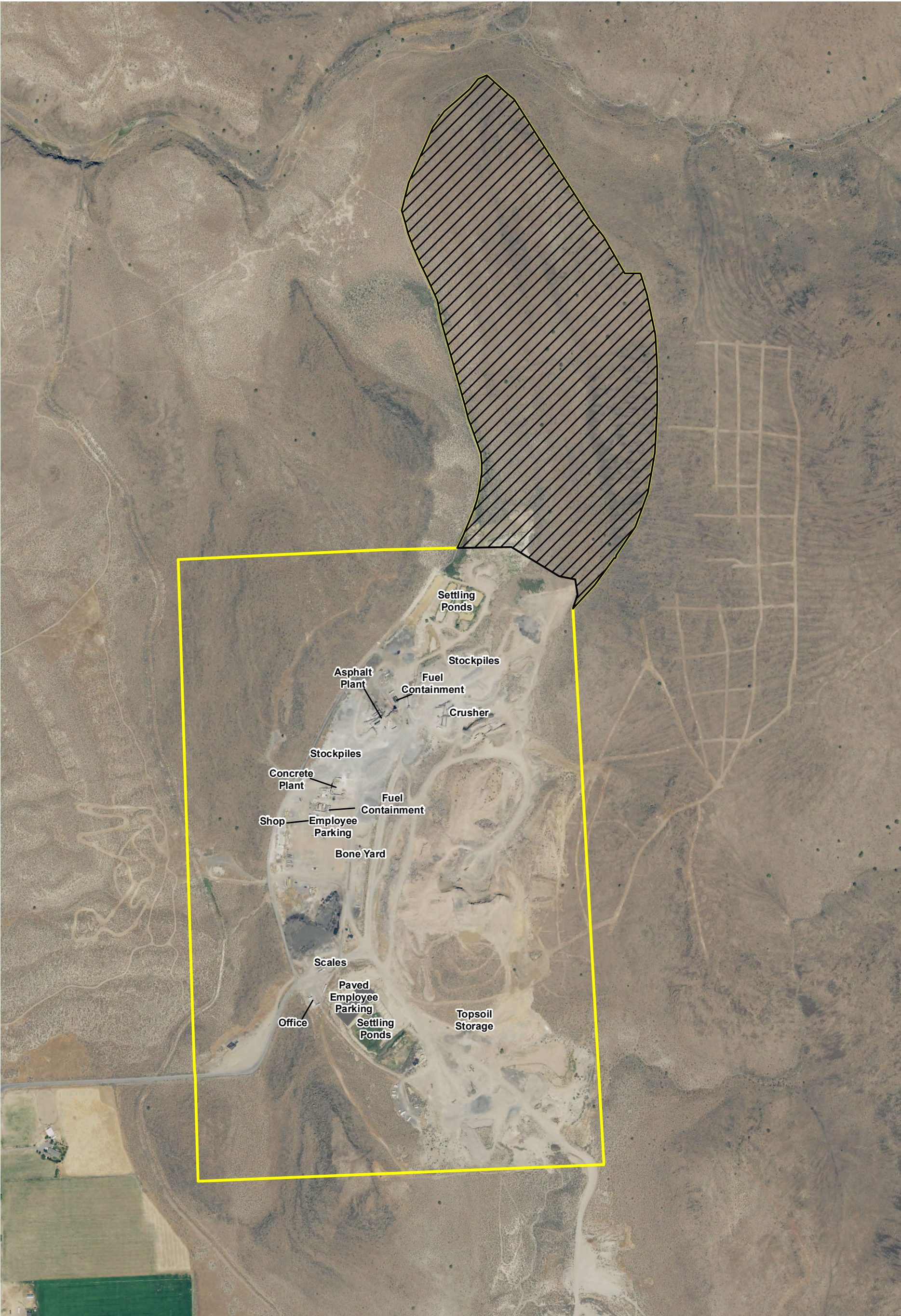


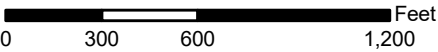
FIGURE 3-2
PARCEL BOUNDARIES
 WARD LAKE QUARRY
 LASSEN COUNTY, CALIFORNIA

SOURCE: MAXAR 2019 AERIAL PHOTOGRAPH



Proposed Expansion Area

Project Site



SOURCE: USDA NAIP 2016 AERIAL PHOTOGRAPH

FIGURE 3-3
PROJECT SITE LAYOUT
WARD LAKE QUARRY
LASSEN COUNTY, CALIFORNIA

TLT Enterprises, LLC acquired ownership of the quarry in 2011. The quarry was leased to Hat Creek Construction and Materials, Inc., which has operated it since that time. Hat Creek Construction continued operating the Ward Lake Quarry under the original conditions outlined in Use Permit No. 96056 and previous Reclamation Plan No. 94032.

In 2017, Hat Creek Construction filed an amendment to Use Permit No. 96056 to address changes to the operating conditions at the site. Use Permit No. 96056 included:

- Modifying the operating hours to again allow for periods of 24-hour operations. This change was requested to respond to changes in State of California contracting practice requiring nighttime operation on Caltrans projects to minimize daytime traffic impacts;
- Extending the life of the quarry from 2020 to 2030; and
- Increasing the annual volume to be mined per year to over 100,000 tons if responding to emergency situations.

A Subsequent EIR was completed for Use Permit Amendment No. 2018-003 and approved on May 14, 2019. Although the Reclamation Plan for the site was not a primary issue and no reclamation plan amendment was submitted, the operating conditions at the site were incorporated by reference by the County into approval of Reclamation Plan Amendment No. 2018-001. No other portion of the Reclamation Plan was amended at that time.

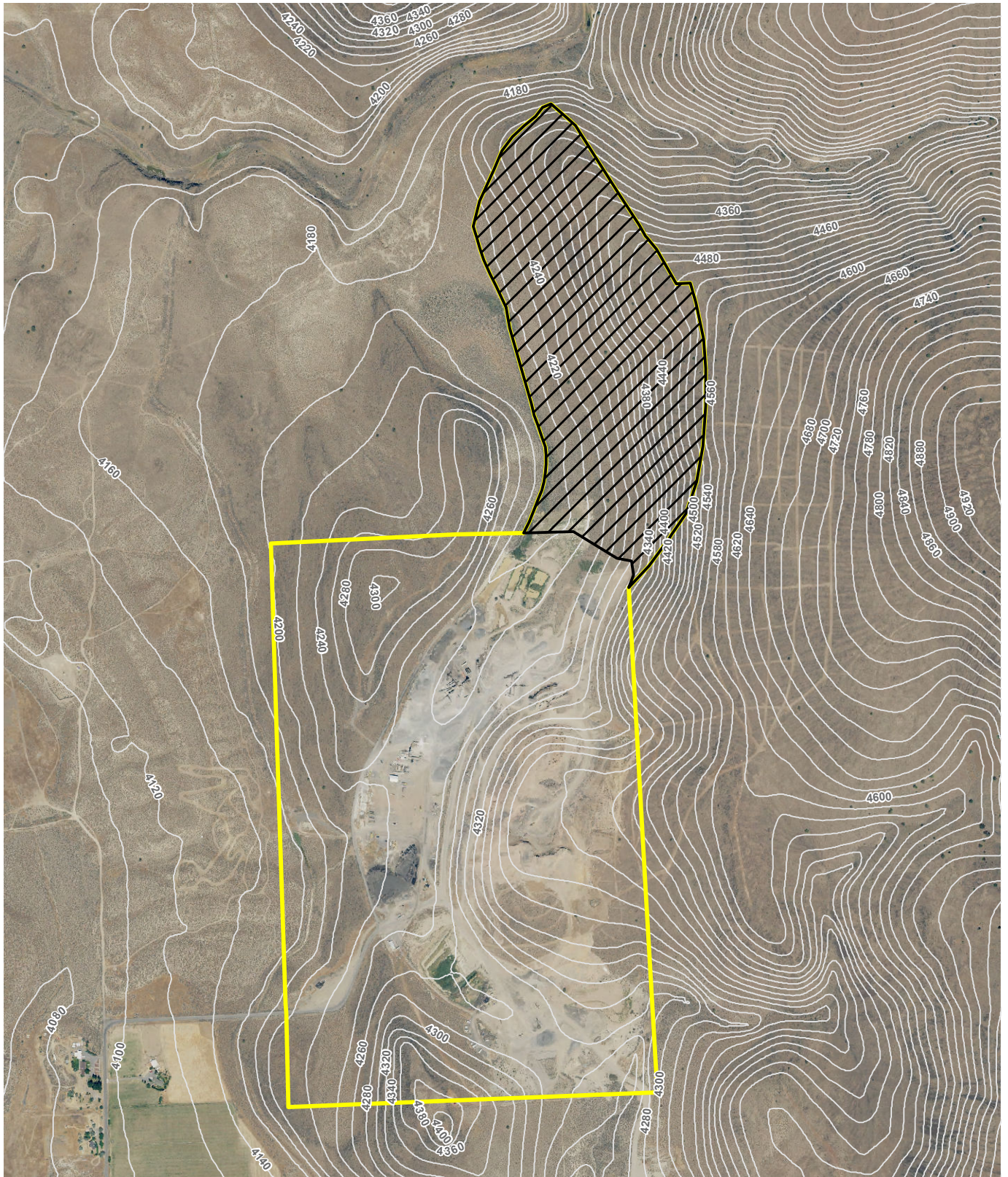
3.3 Environmental Setting

Topography

The proposed Project site is located on the southwestern side of Shaffer Mountain. Topography generally slopes from east to west with gentle to moderate slopes. Prior to mining activities, the site was characterized by a small knob rising approximately 200 feet from the current base of operations. The flat areas at the site (0 to 4 percent slopes) are used for crusher, asphalt, and stockpiles sites and steeper areas (over 16 percent slopes) are utilized for material excavation. The existing topography of the site is illustrated on Figure 3-4.

Hydrology and Water Quality

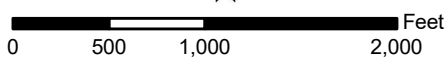
There are no existing streams or bodies of water within the boundaries of the proposed Project site. In addition, the site is not within a 100-year floodplain. There are no existing streams or bodies of water within the existing mining area or boundaries of the proposed expansion area. Drainage in the proposed expansion area occurs as sheet flow to the west and hence to an intermittent unnamed tributary to Secret Creek. Secret Creek is an intermittent stream located north of the proposed expansion area which eventually discharges into Willow Creek. The Eagle Lake Ditch is located approximately 375 feet west of the site and Ward Lake is located approximately 0.5 miles west of the site. Willow Creek is located approximately 1 mile west of the site and the Susan River is approximately 2 miles south of the site. Regional surface hydrology is illustrated on Figure 3-5.



Proposed Expansion Area

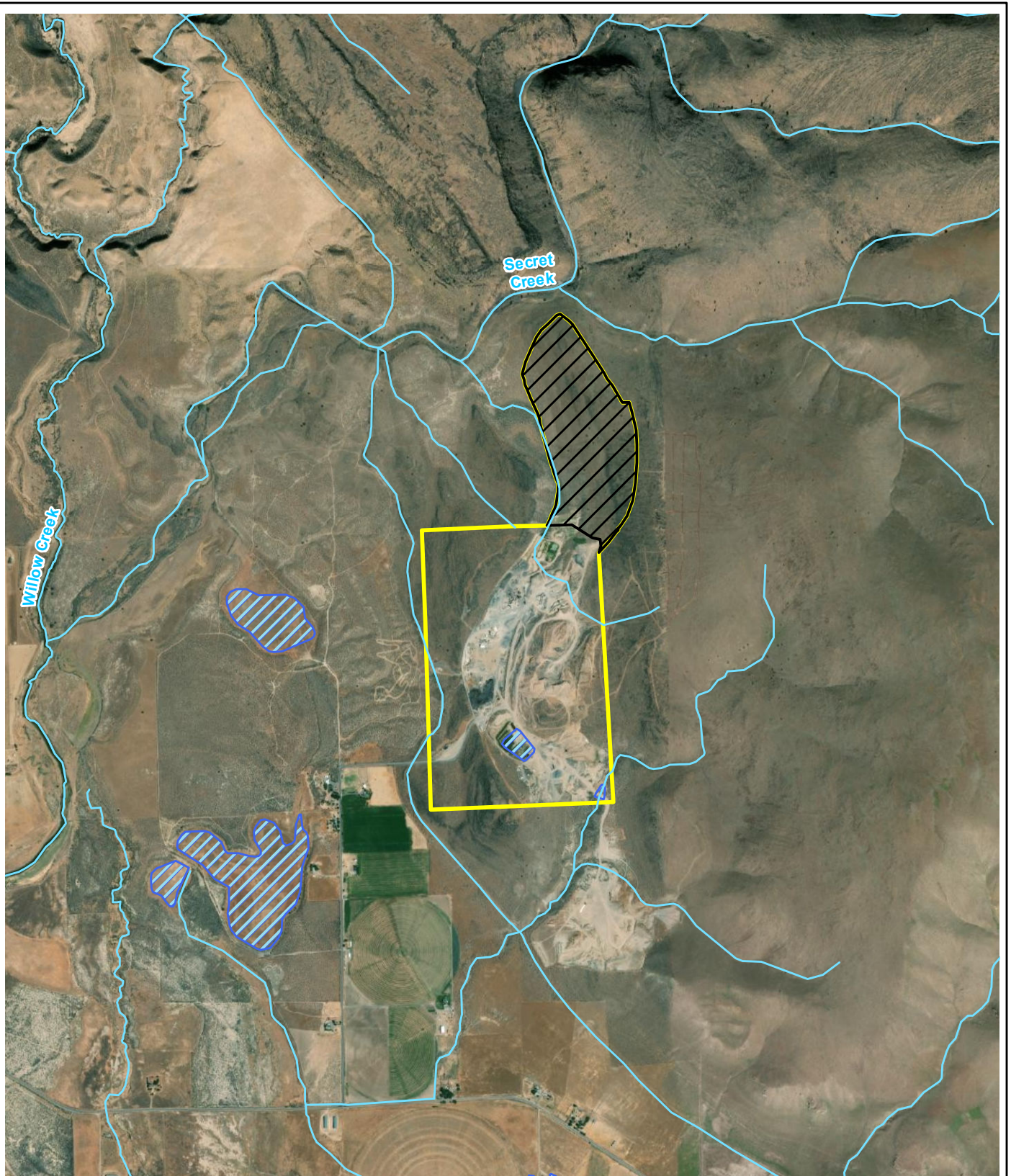


Project Site



SOURCE: USDA NAIP 2016 AERIAL PHOTOGRAPH; USGS 10-METER DEM

FIGURE 3-4
DEM TOPOGRAPHY
WARD LAKE QUARRY
LASSEN COUNTY, CALIFORNIA



- Watercourse
 Project Site
 Proposed Expansion Area
 Waterbody



0 1,000 2,000 4,000 Feet



SOURCE: DIGITALGLOBE 2018 AERIAL PHOTOGRAPH; USGS 2014

FIGURE 3-5
 HYDROLOGY
 WARD LAKE QUARRY
 LASSEN COUNTY, CALIFORNIA

The existing quarry site is composed up of mostly fractured and weather rock; therefore, the site is pervious and a majority of stormwater infiltrates. Concentrated flows are observed only during heavy rain events. These flows are contained and slowed by berms and benches and ultimately directed into settling basins. The existing mining area of the site does not discharge stormwater and received a Notice of Non-Applicability (NONA) under *Order 2014-0057-DWQ General Permit for Stormwater Discharge Associated with Industrial Activities* in 2015.

The proposed Project site is located within the Honey Lake Valley Groundwater Basin, which has been identified as a “low priority basin” by the Department of Water Resources (DWR), signifying that it is not currently at risk for overdraft. Within this basin, *Bulletin 118* estimates the total volume of water stored in the upper 100 feet of saturated basin-fill deposits and volcanic-rock aquifers to be 10 million acre-feet. Estimates of groundwater extraction for agricultural, municipal, and industrial, and environmental wetland uses are 51,000, 15,000, and 3,800 acre-feet, respectively. Deep percolation from agricultural-applied water is estimated to be 14,000 acre-feet.

The predominant source of groundwater recharge of the mine area is percolation through the soil and weathered bedrock into the subsurface. Present mining operations have not encountered groundwater. The proposed additional mining area is currently higher in elevation than the current mining operation. The quarry floor as proposed will remain at a higher elevation than the current quarry.

One onsite groundwater well is used by the current operation for wet suppression of onsite dust. The applicant estimates up to six truckloads of water are currently used per day (4,000 gallons/load) during daytime operations with an average of 4 to 5 loads per day, amounting to approximately 38.3 acre-feet per year. As seen in the groundwater levels for monitored wells in the Project area, found in the DWR Water Data Library, there is currently no trend or pattern indicating overdraft in the basin.

Geology and Soils

The Project site is located on the margin of the Cascade Range and the Basin and Range geologic/geomorphic provinces of California. The Cascade Range province extends from the northern end of the Sierra Nevada north to the Canadian border. In the Project vicinity, the Cascade Range province is bounded to the west by the Klamath Mountain province, to the east by the Basin and Range province, to the south by the Sierra Nevada province, and to the north by the Cascade Range extending through Oregon and Washington.

The Cascade Range province consists of a north-northwest-trending, relatively linear belt of active and dormant strata and shield volcanoes. The regional geologic conditions are dominated by andesitic, rhyolitic, and andesitic volcanic rocks mantled with surficial deposits consisting of pyroclastic rocks, lahar deposits, alluvium, and local lacustrine sediments (Hinds, 1952).

The Basin and Range province is characterized by interior drainage with lakes and playas, and the typical horst and graben structure (subparallel, fault-bounded ranges separated by down-dropped basins). In these basins, moderate to extensive thicknesses of lacustrine (lake) and alluvial deposits are present.

The site is underlain by Quaternary-age terrace deposits and Pleistocene-age volcanic rocks (Grose et al. 2013; Lydon et al. 1960). The terrace deposits are near-shore emergent lacustrine deposits associated with the ancestral Lake Lahontan, which covered most of the Project region (Grose, et al. 2013). The volcanic rocks consist of interlayered basalt, andesite, and rhyolite tuff and flows labeled the Andesite Flows and Pyroclastics of Litchfield (Grose et al. 2013). Surface geology is illustrated on Figure 3-6.

The Holocene-active Honey Lake and Warm Springs Valley faults have been mapped in the Project region, with the Project site being north of the mapped trend of the Warm Springs Valley fault. Both the Honey Lake and Warm Springs faults exhibit right-lateral displacement and are significant faults within the Walker Lane fault zone (Wills, 1990). The Honey Lake fault is about 35 miles long and capable of generating a MW 7.0 earthquake (USGS, 2020b). The Warm Springs Valley fault is about 24 miles long and capable of generating a MW 6.8 earthquake (USGS, 2020b).

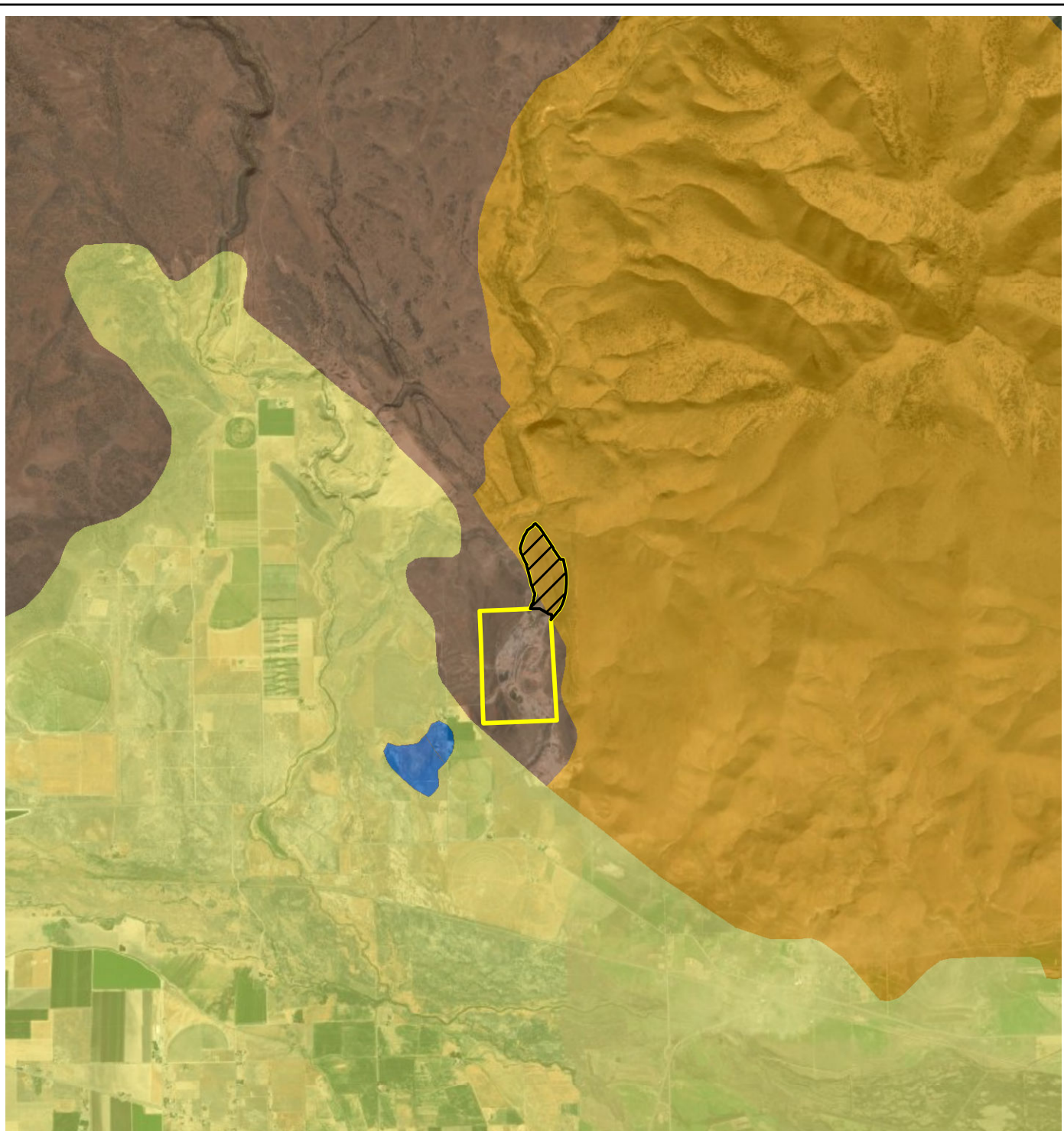
The Honey Lake fault is located about 7 miles southwest of the Project site. The Warm Springs Valley fault is mapped about 13 miles south of the site. The State's fault location maps do not show the Warm Springs Valley fault projecting north of Honey Lake; however, lineations mapped from aerial photographs of the region and observed faulting within the existing quarry area and north through the quarry expansion area with a trend that is coincident with the Warm Springs fault.

The quarry site is not within a special studies zone associated with the Alquist-Priolo Earthquake Fault Zoning Act (AP). Thermal wells and springs exist in the Wendel and Susanville areas; however, there are no known thermal wells or springs on the Project site or adjacent lands.

According to the Natural Resource Conservation Services (NRCS) Web Soil Survey, soils at the Project site are comprised on Devada-Rock outcrop association (2 to 50 percent slopes; non-irrigated land capability class 7e; no specified irrigated land capability classification), Orhood very stony sandy loam (5 to 15 percent slopes; non-irrigated land capability class 7s; no specified irrigated land capability classification), McConnel-Mottsville complex (2 to 9 percent slopes; non-irrigated land capability class 6e), and Fivesprings-Longcreek association (9 to 30 percent slopes; non-irrigated land capability class 7s; no specified land capability classification). These soils are listed by the NRCS as well drained to excessively drained, with no flooding or ponding concerns. Existing onsite soils are illustrated on Figure 3-7.

Biota

The proposed expansion area consists mainly of shrub communities including sagebrush, bitterbrush, and rabbitbrush that are used as forage for several bird species including sage grouse, chukar, Swainson's hawk, golden eagle, and a variety of other nongame birds and mammals. The area is also located within mule deer and winter range of the Horse Lake deer herd as well as resident and wintering pronghorn antelope herds. The proposed quarry expansion area contains several dirt roads as well as a small excavation in the center of the expansion area.



Proposed Expansion Area



Project Site



Q: Quaternary alluvium and marine deposits (Pliocene to Holocene)



Qv: Quaternary volcanic flow rocks, unit 1 (Cascade volcanic field) (Quaternary)



Tv: Tertiary volcanic flow rocks, unit 17 (Cascade Range)



Water

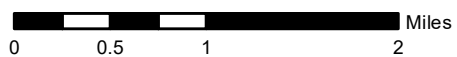
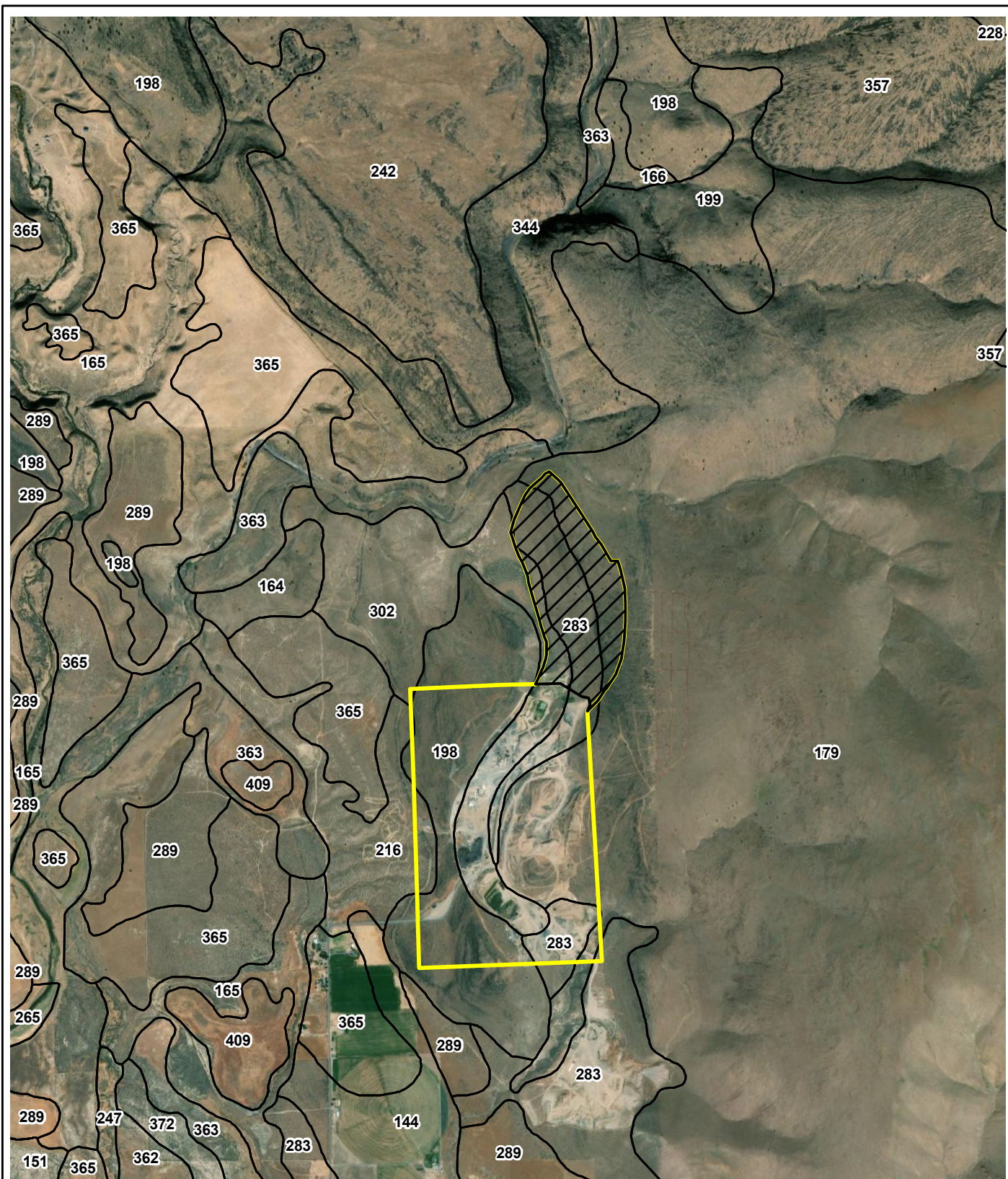





FIGURE 3-6
GEOLOGY
WARD LAKE QUARRY
LASSEN COUNTY, CALIFORNIA

SOURCE: DIGITALGLOBE 2018 AERIAL PHOTOGRAPH; USGS 2014

P:\GIS\71305\WardLakeExpansion2020\Figures\2021_EIR\71305_Geology.mxd



-  Proposed Expansion Area
-  Project Site
-  Soil Map Unit



SOURCE: DIGITALGLOBE 2018 AERIAL PHOTOGRAPH; USGS 2014

FIGURE 3-7
SOILS
WARD LAKE QUARRY
LASSEN COUNTY, CALIFORNIA

The dominant habitat type identified through the California Wildlife Habitat Relationships (CWHR) classification is sagebrush (Mayer and Laudenslayer 1988). Sagebrush habitat is usually large, open, and often discontinuous and stands are usually dominated by big sagebrush (*Artemisia tridentata*). This habitat occurs over a range of middle and high elevations.

Sagebrush is often mixed with other similar shrub species, such as rabbitbrush (*Chrysothamnus* spp.), horsebrush (*Tetradymia* spp.), and bitterbrush (*Purshia* spp.). In some places, stands may have an understory of perennial grasses and forbs.

Special-status species identified by California Natural Diversity Database (CNDDDB), California Native Plant Society (CNPS), and CWHR database searches and literature review were evaluated for their potential to occur within the Project area. No special-status plant or wildlife species were identified within the proposed expansion area during field surveys. Potential for occurrence was based on habitat requirements and proximity to known recorded occurrences of a species.

The potentially occurring species that were generated through desktop review were assessed based on the actual observed habitat types onsite. The assessment found that the following species have the potential to occur and require further discussion.

- Golden eagle (*Aquila chrysaetos*)
- Northern harrier (*Circus cyaneus*)
- Swainson's hawk (*Buteo swainsoni*)
- Greater sage-grouse (*Centrocercus urophasianus*)
- Burrowing owl (*Athene cunicularia*)
- Long-eared owl (*Asio otus*)
- Short-eared owl (*Asio flammeus*)
- Loggerhead shrike (*Lanius ludovicianus*)
- Gray wolf (*Canis lupus*)
- American badger (*Taxidea taxus*)
- Pallid bat (*Antrozous pallidus*)
- Townsend's big-eared bat (*Corynorhinus townsendii*)
- Pygmy rabbit (*Brachylagus idahoensis*)
- White-tailed jackrabbit (*Lepus townsendii townsendii*)
- Ornate dalea (*Dalea ornata*)
- Spiny milkwort (*Polygala subspinosa*)
- Susanville beardtongue (*Penstemon sudans*)

Archaeological and Historical Resources

An archaeological study conducted in 1980 included in the 1981 EIR prepared for the Project site (ECO, 1980) noted that the site is located in an area which was likely used by members of two bordering tribes: The Northeastern Maidu and the Northern Paiute. The site is also near the Nobles' Road Trail established in 1852 and passing just south of Shaffer Mountain. The 1980 study found no cultural or historical resources located within the existing mining area.

An additional archaeological survey was completed for the 78.6-acre expansion area in September 2020. One cultural resource and two isolated finds were identified within the proposed expansion area (refer to Section 4.6, *Cultural and Tribal Cultural Resources*).

Surrounding Land Use

The site is surrounded by open grazing lands, generally zoned U-C (Upland Conservation District), and designated in the *Standish-Litchfield Area Plan* as “Extensive Agriculture.” Immediately adjacent to and south of the site, a smaller aggregate mine is located on Bureau of Land Management (BLM)-administered land. Other BLM land is located to the east and south and the Wells Ranch is located directly to the north.

Land use adjacent to the current operation boundaries are defined by the *Lassen County General Plan Land* as “Agricultural Residential” to the west, “Extensive Agriculture” to the north, and “Open Space” to the south and the east. Zoning designations adjacent to the current operations is O-S (Open Space District) to the south and east, U-P-A-C (Upland Conservation/Agricultural Preserve Combining District) to the north, and A-2-B-20-A (Agricultural Residential 20-Acre Building Site, Agricultural Combining District) to the west.

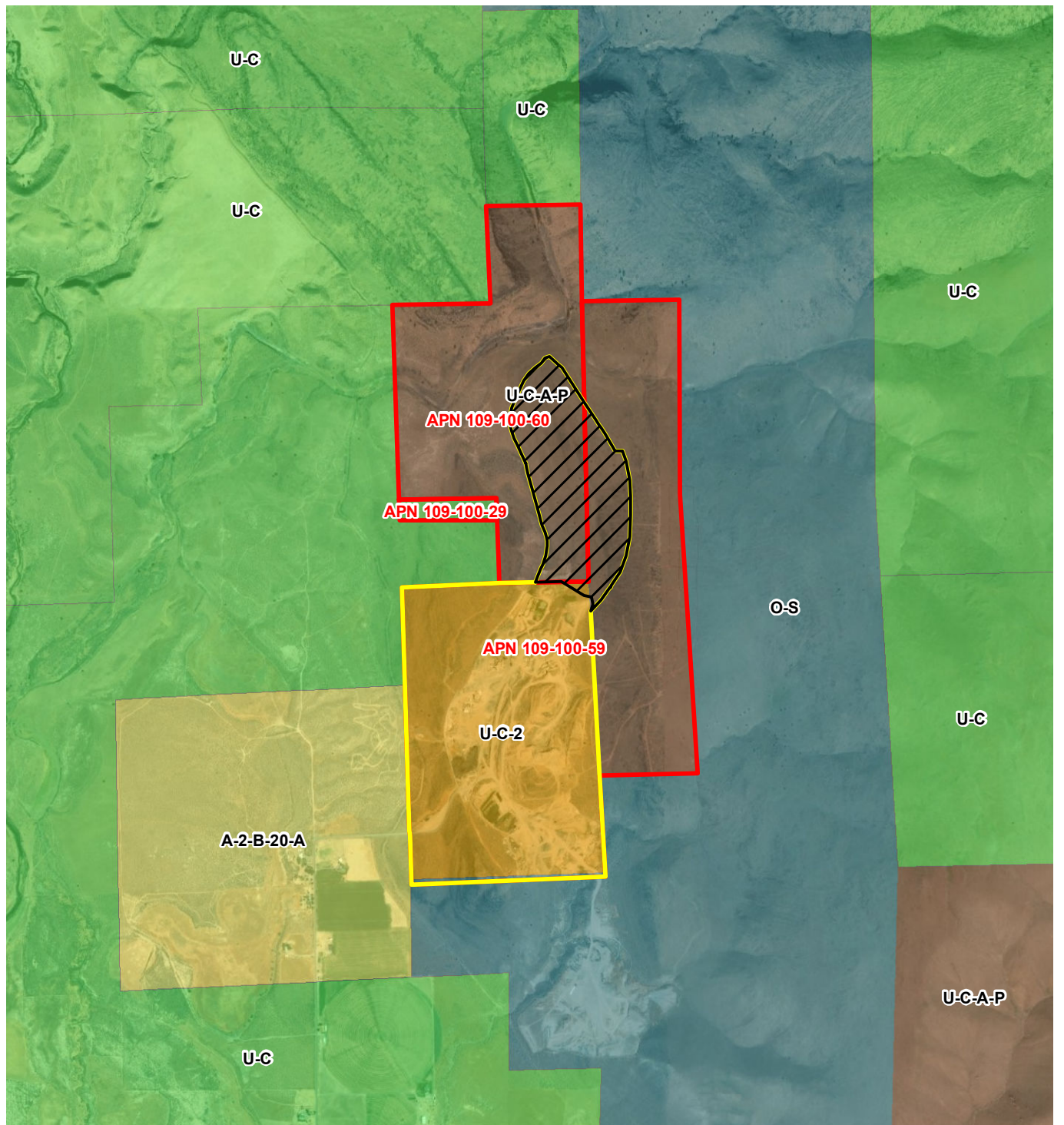
The General Plan land use designations for properties adjacent to the proposed expansion area are “Extensive Agricultural” to the west, “Open Space” to the north and east, and “Mountain Resort/Belfast Initiative Area” to the north and west. The zoning designations for the adjacent parcels are U-P (Upland Conservation District) to the west and O-S (Open Space) to the south, east, and north. Refer to Figure 3-8 and Figure 3-9 for a depiction existing zoning and General Plan land uses.

Twelve residences are located within one mile of the existing quarry. The nearest residence occurs approximately 470 feet from the west property line of the existing quarry and was constructed in approximately 2007. The nearest residence to the proposed expansion area (the same home) is approximately 4,500 feet to the south. Nearby residences are illustrated on Figure 3-10 and adjacent property ownership is illustrated on Figure 3-11.

Existing General Plan and Zoning

The proposed Project site is located in Lassen County and within the area covered by the *Standish-Litchfield Area Plan*. The Standish-Litchfield planning area extends from the north shore of Honey Lake to the toe slopes of Shaffer Mountain. The portion of the Project site currently used for mining and processing operations is zoned U-C-2 (Upland Conservation/Resource Management District).

The two expansion parcels (APN 109-100-59 and APN 109-100-60) are designated as “Extensive Agriculture” by the *Lassen County General Plan*. APN 109-100-59 is zoned U-C-2 (Upland Conservation/Resource Management District), and APN 109-100-60 is zoned U-C-A-P (Upland Conservation/Agricultural Preserve Combining District). Current zoning and General Plan land use are illustrated on Figures 3-8 and 3-9, respectively.



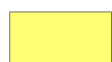
Project Site



Proposed Expansion



Approximate Parcel Boundary



A-2-B-20-A (Agricultural Residential District/Building Site Combining District/Agricultural Combining Districts)



O-S (Open Space District)



U-C (Upland Conservation District)



U-C-2 (Upland Conservation/Resource Management District)



U-C-A-P (Upland Conservation District/Agricultural Preserve Combining District)



0 1,000 2,000 4,000 Feet

FIGURE 3-8

ZONING

WARD LAKE QUARRY

LASSEN COUNTY, CALIFORNIA

SOURCE: MAXAR 2019 AERIAL PHOTOGRAPH; LASSEN COUNTY 2018

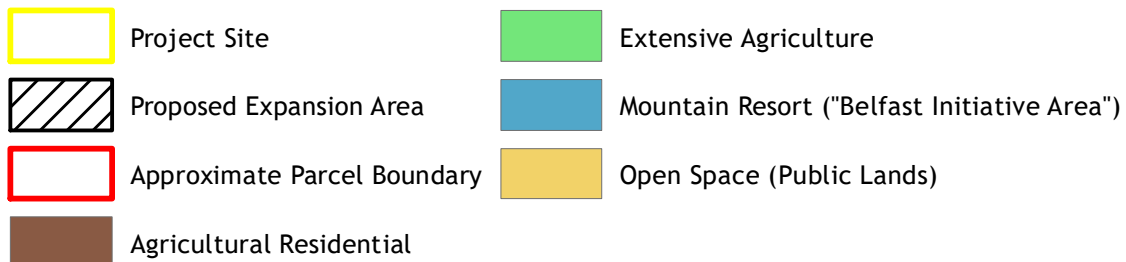
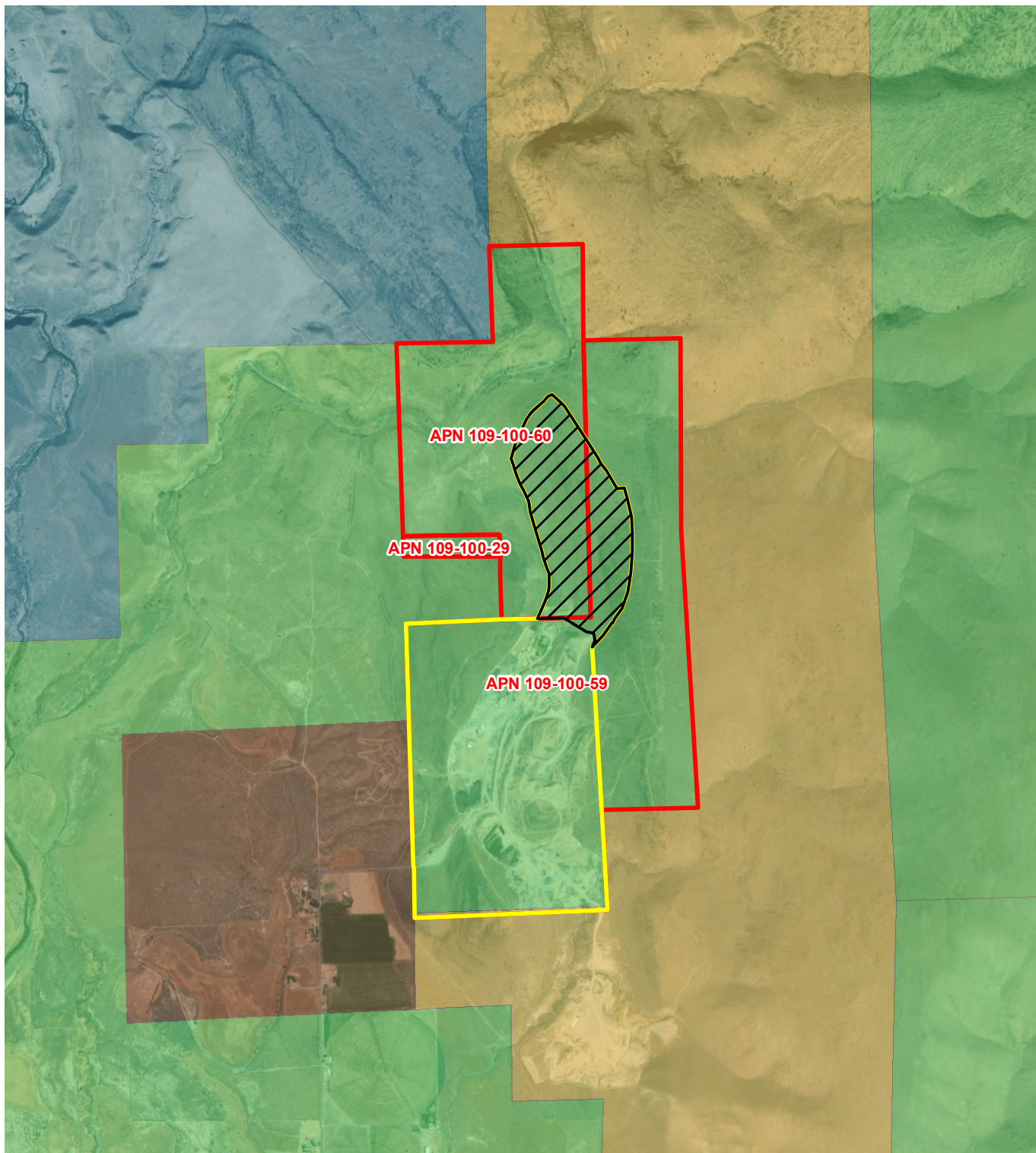
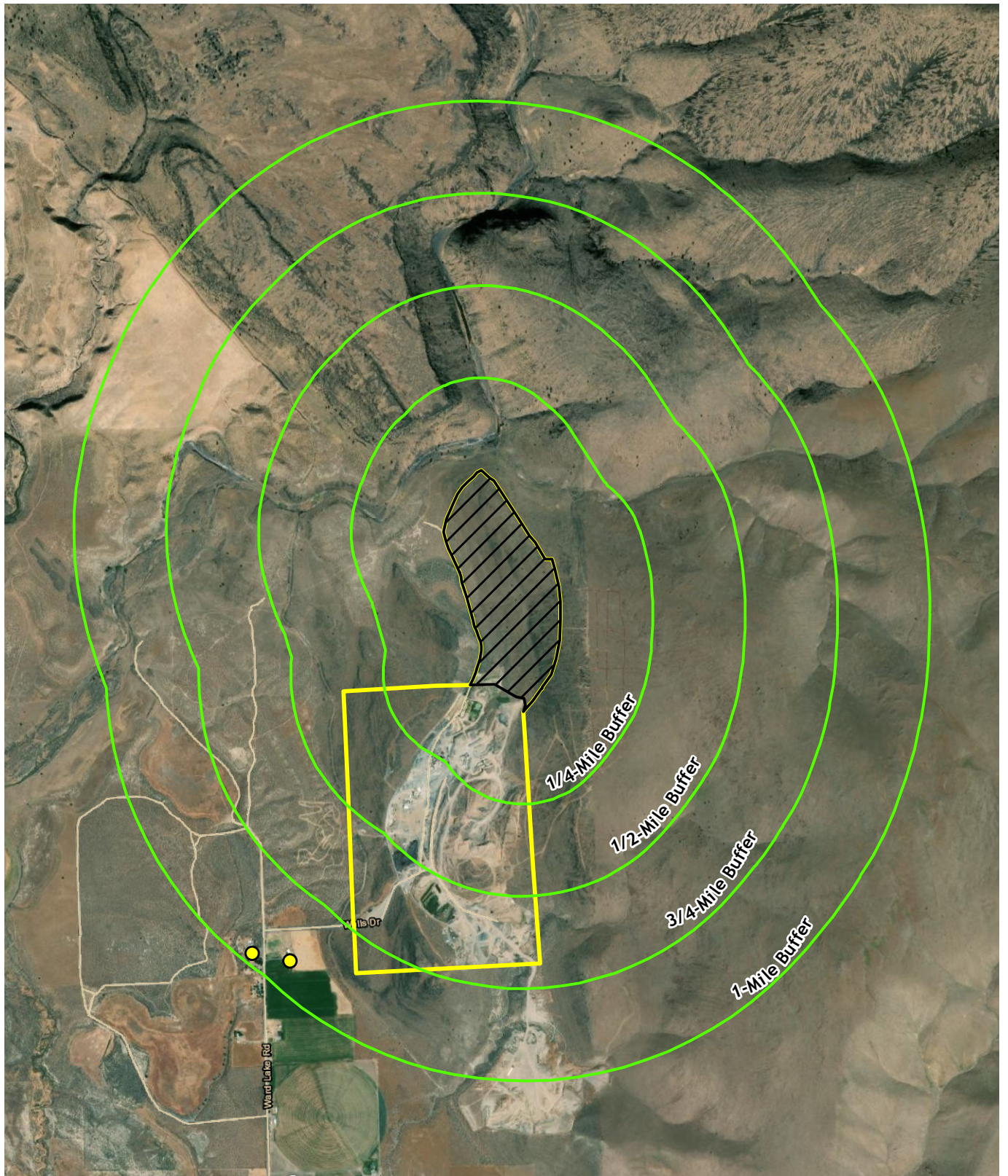


FIGURE 3-9
GENERAL PLAN LAND USE
WARD LAKE QUARRY
LASSEN COUNTY, CALIFORNIA



0 1,000 2,000 4,000 Feet

SOURCE: MAXAR 2019 AERIAL PHOTOGRAPH; LASSEN COUNTY 2014



● Nearby Residence

▨ Proposed Expansion Area

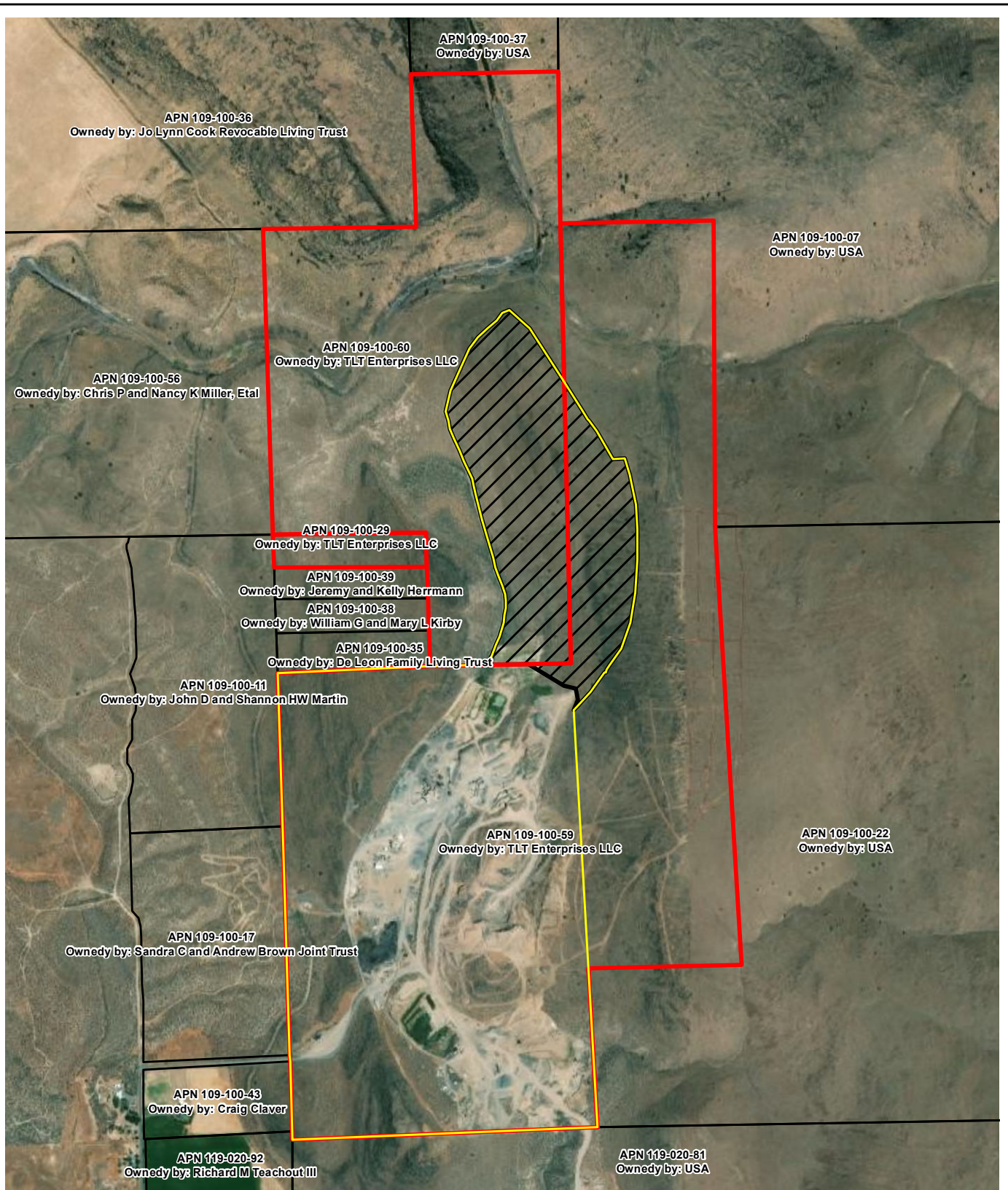
▭ Project Site



SOURCE: MAXAR 2019 AERIAL PHOTOGRAPH

0 1,000 2,000 4,000 Feet

FIGURE 3-10
NEARBY RESIDENCES
WARD LAKE QUARRY
LASSEN COUNTY, CALIFORNIA



Project Site

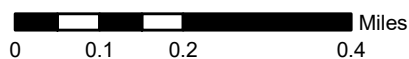
Approximate Parcel Boundary



Proposed Expansion Area



Approximate Surrounding Parcel Boundary



SOURCE: MAXAR 2019 AERIAL PHOTOGRAPH; CNDDB AUGUST 2020

FIGURE 3-11
ADJACENT LAND OWNERS
WARD LAKE QUARRY
LASSEN COUNTY, CALIFORNIA

3.4 Existing Baseline Operations

The mining operation currently operates under Lassen County Use Permit No. 2018-003 and Reclamation Plan No. 2018-001, adopted in May 2019; Lassen County Use Permit No. 96056, adopted in September 1997; and Reclamation Plan No. 94032, adopted in July 1994.

The surface mining operation is presently permitted for the mining of rock, crushing, screening, washing, material stockpiling, fuel storage; operation of a cement plant (12,000-cubic-yard annual limit) and asphalt plant; and the use of settling ponds, scales, an office, and a truck shop.

Grading, excavating, and blasting are prohibited onsite between January 1st and March 31st, except in a state of emergency as declared by the Local Emergency Services Director and/or the Board of Supervisors and/or the City of Susanville. The detonation of explosives is prohibited between the hours of 6:00 p.m. and 7:00 a.m. year-round.

Materials produced at the site include asphalt, concrete, various sizes of crushed rock, and crushed base rock which are used as construction materials. The materials at the site have been evaluated both by an independent testing laboratory and the California Department of Transportation (Caltrans) with test results indicating superior material not commonly found in the region. The quality of the resources and choice location to the existing and potential market aggregates and paving materials were the determining factors in choosing the site for the planned operations in 1981.

Existing Hours of Operation

The current use permit allows for six days a week, 24-hour operations, with the exception of January 1st to March 31st when no 24-hour operations may occur. The quarry typically operates 10 hours per day, five days a week, with maximum operations of 24 hours per day, six days a week.

Existing Mining Area

The mining area of the current operation is 160 acres. Approximately 138 acres of the mining area are currently disturbed.

Existing Site Life

Under Lassen County Use Permit Amendment No. 2018-003 and Reclamation Plan Amendment No. 2018-001, the end date of mining for the operation is 2030.

Existing Volume Removal

The Ward Lake Quarry is permitted to remove 100,000 tons of material per year. The actual amount removed varies by year and product demand. In order to respond to emergency projects, the annual removal volume could exceed 100,000 tons.

Existing Equipment and Truck Volume

Equipment onsite includes a hot mix asphalt plant, lime slurry mix plant, a concrete plant, crushing plant, wash plant, sand plant, and generators. Off-road equipment including loaders, excavators, haul trucks, and a dozer are used for mining operations as well. Truck volumes for the operation are limited by Condition #8 of Use Permit No. 2018-003 as follows:

8. *Haul trucks (loaded or empty) associated with the mining operation shall not exceed a daily average of 26 round trips (26 arriving and 26 departing) throughout the calendar year and shall not exceed a daily maximum of 275 round trips (275 arriving and 275 departing), with a maximum of 173 total trips occurring between the hours of 10:00 p.m. and 7:00 a.m., excluding personal employee vehicles and light-duty trucks assigned to employees.*

Existing Truck Distribution

Truck traffic to and from the site is currently distributed with 60 percent of truck traveling to and from the site using Center Road West of Ward Lake Road and 40 percent of trucks using Center Road east of Ward Lake Road for travel to and from the site. During 24-hour operations, trucks are routed to not pass through the community of Litchfield on Center Road at night during 24-hour operations of the Project. Truck traffic traveling to and from the site does not use Center Road east of Ward Lake Road between the hours of 6:00 p.m. and 7:00 a.m. During these hours, all trucks head east on Highway 395, turn west on Center Road from Ward Lake Road, then turn south on Leavitt Lane to access Highway 395. Trucks traveling to the site from Highway 395 east of Litchfield turn north onto Leavitt Lane and then east on Center Road to access the Project site. No Jake brakes are permitted during nighttime hours.

Resolution No. 97-067 Operating Conditions

On September 23, 1997, Board of Supervisors Resolution No. 97-067 was adopted to approve Use Permit No. 96056 and certify the Final Environmental Impact Report. The resolution contained conditions of approval for the current mining operation:

13. *The following reclamation shall be required and, when different or in addition to the provisions of the approved reclamation plan, said reclamation plan shall be amended by application:*

Reclamation of graded areas. The intent of the Reclamation Plan shall be to recreate to the extent possible a viable, self-sustaining plant community similar to that which existed prior to mining as follows:

Sand and Gravel Excavation Areas: These areas shall be regraded to maximum slopes of 2H:1V, shall be resoiled with adequate growth medium to support vegetation including fines from the crusher and stockpiled topsoil and shall be vegetated with native species including sage, bitterbrush, and rabbit brush. The success of revegetation in these areas shall be monitored by qualified personnel with reports submitted to the County Community Development Department at least once per year for five years. The final approved species list and planting density must be approved by the County in consultation with the Department of Fish and Game.

Rock Quarry Area: This area shall be regraded to a maximum overall slope of 2H:1V and shall be benched with minimum 10 foot wide benches at vertical intervals appropriate for the type of material, but

not greater than 15 feet. The benches shall be sloped to drain toward the hillside, shall be resoiled with adequate growth medium to support vegetation including fines from the crusher and stockpiled topsoil and revegetated using native range grasses shrubs, and trees if they can be supported.

The operator shall institute a test plot program on the first available rock face bench to determine the best species mix and planting scheme for subsequent benches. The test plots shall be set up and monitored by qualified personnel with reports submitted to the County Community Development Department at least once per year for five years. The final approved species list and planting density must be approved by the County in consultation with the Department of Fish and Game.

Timing/Phasing of Reclamation: Reclamation of sub-areas shall take place in a phased manner where possible as excavation is completed.

Protection of Replanted Areas: Replanted areas shall be protected by fencing or other approved method intended to exclude livestock and deer until vegetation is established. Perimeter livestock fencing shall be provided and shall be four wires maximum, bottom wire smooth and no closer than 18 inches to the ground with total fence height not to exceed 42 inches. More site-specific deer proof fencing shall also be provided directly around replanting areas.

14. *The approved reclamation plan for the project, and any future amendments thereto, is hereby incorporated into this use permit. Adherence to the provision of the approved reclamation plan, and any County-approved amendments thereto, is hereby made a condition of approval.*
15. *Topsoil (the top surface layer supporting vegetation) shall be scraped and salvaged concurrent with mining, stockpiled and protected from erosion, and shall be re-applied to disrupted surfaces, to promote revegetation and slope stability upon reclamation.*
16. *At a minimum, wet suppression shall be used to control dust at all times from excavation, processing activities on haul roads.*
17. *The disturbed portion of the site, including quarry highwall benches, shall be revegetated with native and/or compatible species per the approved reclamation plan.*
18. *Onsite fuel tanks shall be placed and kept in impermeable containment structures capable of holding at least 110 percent of the tank capacity pursuant to the County's aboveground fuel storage standards.*
19. *The operator will participate in the County's mine permit administration and monitoring program by submitting annual fees pursuant to County Code Section 9.60.110.*
20. *If any historic or pre-historic artifacts are discovered, work in the immediate vicinity shall stop, the lead agency shall be notified, and a qualified archaeologist brought in at the operators expense to assess the resource(s) and recommend mitigation.*
21. *Except in a state of emergency as declared by the local Emergency Services Director and/or the Board of Supervisors and/or the City of Susanville, no grading, excavating, or blasting on the site shall be allowed between January 1st and March 31st annually.*

-
22. *Hours of operation, including truck traffic to and from the site on Ward Lake Road shall be limited to 6:00 a.m. to 7:00 p.m. Monday through Saturday.*
23. *In the event that the ready-mix concrete plant is allowed and installed onsite, the applicant shall paint that portion of the concrete plant visible from Ward Lake Road and Center Road (A27) as determined by the County, to blend with surrounding background colors.*
24. *Ready-mix concrete production shall be limited to 12,000 cubic yards per year.*
25. *The operator shall contract with a California Air Resources Board certified private contractor for an annual compliance test at the Ward Lake operation to determine compliance with APCD permit. The test shall be conducted during facility operations before January 1 every year and the results submitted to APCD for review.*
26. *Explosives shall be handled by a licensed operator, and shall be stored in an ATF-inspected and approved magazine.*
27. *No explosives shall be detonated between the hours of 6:00 p.m. and 7:00 a.m.*
28. *The operation shall not exceed the noise standards for industrial activities as described in the Lassen County Noise Element as follows:*
- Noise produced by industrial uses shall not exceed 70 dB Ldn/CNEL at the nearest property line. (1989 Noise Element, page 21, #9)*
- The standards of Table II (1989 Noise Element page 19) are also applicable.*
29. *The operator shall at the lead agency's request, measure the noise levels in the vicinity of operating equipment, at the nearest property line and at the nearest residential property line and submit the result to the lead agency for review. Measurements shall be taken by a qualified acoustical analyst.*
30. *The paved access to the site from Ward Lake Road shall serve as the only truck access to and from the site.*
31. *The operation (except the access road) shall be conducted within the following described area:*
- Township 30N, Range 14E, MDB & M:*
Section 32: SE 1/4 of the SE 1/4 of the NE 1/4;
E 1/2 of the NE 1/4 of the SE 1/4
NE 1/4 of the SE 1/4 of the SE 1/4
Section 33: SW 1/4 of the NW 1/4;
W 1/2 of the SW 1/4
32. *The location of equipment, quarry, sand and gravel pits, maintenance areas, etc. shall be as shown in the site maps incorporated into the approved reclamation plan as such plan may be amended from time to time with County approval.*
-

33. *The operator shall identify the boundaries of the approved mine activity area and flag the corners so that the boundaries are readily visible to County and State officials authorized to inspect the site.*
34. *The applicant shall provide the necessary funding to the County Road Department to install speed limit signs on Ward Lake Road, upon determination by the County Engineer, applying accepted traffic safety considerations, that speed limit signs would be beneficial in reducing truck speeds and increasing safety on Ward Lake Road. The applicant shall further provide the County funding to install a stop sign at the intersection of the project access road and Ward Lake Road upon similar determination by the County Engineer that such a sign would be beneficial. The applicant's obligations herein shall be valid for a period not to exceed two years from the date of project approval.*
35. *In the event that the approval of this use permit is legally challenged on grounds including, but not limited to, CEQA compliance and/or general plan consistency or adequacy, the County will promptly notify the applicant of any claim, action, or proceeding, and the County will cooperate fully in the defense of the matter. Once notified that a claim, action, or proceeding has been filed to attack, set aside, void or annul an approval by the Planning Commission or the Board of Supervisors concerning this use permit, the applicant agrees to defend, indemnify, and hold harmless the County and its agents, officers, and employees.*

Resolution No. 2018-003 Operating Condition

Conditions of approval pursuant to Use Permit Amendment No. 2018-003 follow:

9. *All requirements and conditions of the previously approved Use Permit No. 96056 and Reclamation Plan No. 94032 remain applicable, excepting the changes addressed in Use Permit Amendment No. 2018-003 and Reclamation Plan Amendment No. 2018-001.*
10. *No nighttime operations (7:00 p.m. to 6:00 a.m.) shall be conducted during the period of January 31st through March 31st of each year.*
11. *No grading, blasting, or excavating shall be allowed onsite between the hours of 6:00 p.m. and 7:00 a.m., year-round.*
12. *Start-up of onsite generators shall be restricted to between the hours of 7:00 a.m. and 10:00 p.m.*
13. *Within 60 days of issuance of authorization to operate, all lighting on site shall be downward facing and fully shielded. All lighting shall be directed internally into the site and berm site areas to minimize impact.*
14. *Haul trucks shall only use low beams when passing along Ward Lake Road during nighttime operations.*
15. *Haul trucks associated with the mining operation shall not use Center Road (A-27) east of Ward Lake Road between the hours of 10:00 p.m. and 7:00 a.m.; during these hours all trucks must turn west onto Center Road from Ward Lake Road to avoid the community of Litchfield.*
16. *Haul trucks (loaded or empty) associated with the mining operation shall not exceed a daily average of 26 round trips (26 arriving and 26 departing) throughout the calendar year and shall not exceed a daily maximum of 275 round trips (275 arriving and 275 departing), with a maximum of 173 total trips occurring between the hours of 10:00 p.m. and 7:00 a.m., excluding personal employee vehicles and light-duty trucks assigned to employees.*

17. *Scale log data for Ward Lake Pit (CA Mine ID #91-18-0008) shall be provided to Lassen County by the mine operator by July 1, annually.*
18. *Use of “Jake brake” (engine brake) shall be prohibited along the mine access road and Ward Lake Road. Within 60 days of issuance of authorization to operate, the mine operator shall post “No Use of Jake Brake” signs on the access road and at the Center Road and Ward Lake Road intersection, in coordination with the Lassen County Department of Public Works.*
19. *Within 60 days of issuance of authorization to operate, the mine operator shall post advisory “Reduced Speed to 25 MPH” signs on the access road and Ward Lake Road (one northbound and one southbound, at minimum), in coordination with the Lassen County Department of Public Works.*
20. *Within 60 days of issuance of authorization to operate, the mine operator shall post “Wildlife Crossing” signs along Ward Lake Road and Center Road, in coordination with the Lassen County Department of Public Works.*
21. *The mine operator (TLT Enterprises/Hat Creek Construction) shall conduct driver education events, annually at minimum, to increase driver awareness to reduce impacts to wildlife and local residents, and shall give notice the Planning and Building Services Department prior to the date of each event.*
22. *The mine operator shall give written notice to the Lassen County Department of Planning and Building Services and all residents of Ward Lake Road at least 72 hours prior to commencing a non-emergency project, requiring nighttime operations, that will last 5 or more days and/or was awarded by way of formal bid process.*
23. *The operator shall assist Lassen County Road Department with the installation of an eastbound left-hand turn lane on Center Road onto Ward Lake Road, within 30 months of project approval (timeline as established by the Director of Public Works), by providing the necessary asphalt materials.*
24. *The operator shall assist the Lassen County Road Department with the repair of and/or asphalt concrete overlay of the Lassen County maintained portion of Ward Lake Road, within 30 months of project approval (timeline as established by the Director of Public Works), by providing the necessary asphalt materials.*
25. *Within 60 days of project approval, the operator shall submit a \$200,000.00 surety bond, payable to Lassen County, as financial assurance for the completion of the above road maintenance assistance. Upon completion of all required assistance, the surety bond shall be released back to the operator. If the above road maintenance is to be completed in phases, the Director of Public Works may authorize incremental release of said bond, as phased work is completed.*
26. *Prior to issuance of an authorization to operate by Lassen County, the operator shall install a berm or barrier to shield residences in the project vicinity from noise produced by the asphalt plant generator. The berm or barrier shall extend to a height even with the generator enclosure. The opening of the generator enclosure shall be oriented to the north.*

Permitted Mine Area – Reclamation Plan No. 94032 and No. 2018-001

As permitted, revegetation of the current mine area will include the following:

- The processing area will be seeded with a mix of sagebrush (*Artemisia tridentate*) at two pounds of pure live seed (PLS) per acre, rabbitbrush (*Ericameria nauseosa*) at four pounds of PLS per acre, bitterbrush (*Purshia tridentate*) pure seed at one pound per acre, bluebunch wheatgrass (*Elymus spicatus*) at three pounds of PLS per acre.
- The existing quarry area will be seeded with a mix of sagebrush (*Artemisia tridentate*) at one and a half pounds of PLS per acre, rabbitbrush (*Ericameria nauseosa*) at three pounds of PLS per acre, bluebunch wheatgrass (*Elymus spicatus*) at three pounds of PLS per acre, bottlebrush squirreltail (*Elymus elymoides*) at three pounds of PLS per acre, green ephedra (*Ephedra viridis*) at one pound of PLS per acre, and bitterbrush (*Purshia tridentate*) plugs at twenty-six plugs per acre.

3.5 Proposed Use Permit and Reclamation Plan Amendments

The proposed Project includes modifications to existing permitted operations at the Ward Lake Quarry. The following changes are proposed to the quarry's existing baseline operations:

- Expansion of approximately 78.6 acres, with an associated additional volume of 5,000,000 tons of material.
- Extension of life of the mine from 2030 to 2050.
- Increase of maximum volume extracted per year to 200,000 tons.

The requirements and conditions of the previously approved Use Permit No. 2018-003 remain applicable with exception of any proposed changes associated approval of the proposed Project as a result of this DSEIR.

Proposed Hours of Operation

The mine operates Monday through Saturday, between the hours of 6:00 a.m. and 7:00 p.m., with 24-hour operations carried out on an as-needed basis. In accordance with current operating conditions no nighttime operations (7:00 p.m. to 6:00 a.m.) are conducted during the period of January 31st through March 31st of each year. No grading, blasting, or excavating are conducted between the hours of 6:00 p.m. and 7:00 a.m. year-round, and start-up of onsite generators is restricted to between the hours of 7:00 a.m. and 10:00 p.m. The proposed Project does not include changes to the existing hours of operation.

Proposed Mining Area

The proposed Project would allow the expansion of the site to 78.6 acres north of current operations (refer to Figure 3-2). Processing will continue to occur onsite at its current location. Quarrying will continue as current operations into the expansion area. Portions of the current quarry area will be reclaimed.

The expansion will be operated in the same way as the current mine area. It is an open pit mine for basalt rock and sand and gravel deposits. Rock is crushed and the rock and sand are sorted and stockpiled. The materials are either transported for use offsite or used onsite for the production of asphalt concrete or ready-mix concrete. As permitted, there is an occasional need to import supplemental aggregates for the concrete production. These are the same procedures as permitted for the current operation. A portable crusher may be moved closer to the active quarry face in the expansion areas as the mine face moves farther north. This is to make the process more efficient overall. The processing plant will remain where it is located and perform as previously permitted. Rock will be removed beginning at the south near the current operation and moving to the north.

Proposed Site Life

The life of the Ward Lake Quarry is currently permitted to 2030. The proposed Project will extend the site's life by 20 years to 2050.

Proposed Volume Removal

As previously stated above, the proposed quarry expansion is approximately 78.6 acres to the north of the existing quarry. This expansion has an estimated volume of 5,000,000 tons of material. The overall maximum volume of material permitted per year is proposed to increase from 100,000 tons to 200,000 tons. The actual amount removed varies by year and product demand. In an effort to reduce the movement of material from the expansion area, a portable crusher may be moved into the flat area on the western side of the proposed expansion area.

Proposed Equipment and Truck Volume

The proposed Project does not include additional equipment than what is currently used for the existing operation. The existing off-road equipment will be operated in the proposed expansion area. The processing area of the operation will remain in the same location.

The proposed Project includes an increase in crushing operations from 100,000 tons per year to 200,000 tons per year. The proposed Project will also require additional operating hours of existing off-road equipment to support the increase in aggregate production. The annual operating hours of the majority of off-road equipment will increase by 50 percent. The proposed Project will not change the hot mix asphalt plant, the lime slurry mix plant, the concrete plant or portable plant production or operations.

The proposed Project will not result in an increase in average or maximum daily truck volumes generated by existing operations. Truck volumes were limited by Condition #8 of Use Permit 2018-003 to include an average of 26 round-trip (26 arriving, 26 departing) truck trips per day during the 305-day operating period. Average truck volumes would remain the same with the proposed Project and not exceed the maximum allowed truck volume of 275 round-trip truck trips per day (275 arriving, 275 departing). Additionally, truck distribution will not change from existing operations.

Proposed Reclamation Plan Amendment

The primary objectives of the reclamation plan amendment are to 1) establish a new vegetative cover that provides future fire protection; 2) stabilize finished mined surfaces and prevent erosion; and 3) revegetate with plant species adapted to this locale. Refer to Appendix B, *Mining and Reclamation Plan Amendment*.

The final slope of the proposed expansion area will be 1:1 (H:V). Mine faces will be shaped to have a 50-foot highwall and 12-foot benches at a 1:1 (H:V) slope. The quarry wall will be composed of hard rock and will not require stabilization. The area is composed of hard rock and highwalls will be graded at an inclination as to meet the minimum factor of safety (FOS). Benches will be constructed to drain to the margins of the highwall and/or to centralized collection areas that capture and convey drainage to the bottom of the cut slope.

The quarry floor and benches in the 78.6-acre expansion area will be seeded with a mix of sagebrush (*Artemisia tridentata*) at two pounds of PLS per acre, rabbitbrush (*Ericameria nauseosa*) at four pounds of PLS per acre, bitterbrush (*Purshia tridentata*) one pound of pure seed per acre and blue bunch wheat grass (*Elymus spicatus*) at three pounds per acre.

Seed will be ordered from a reputable supplier that collected or grew out seed from a source as close to the project site as possible. Seed will be properly labeled as genus, species, subspecies, variety, and source and will be handled and packed in a manner that ensures the purity and viability of the materials. Weed seed will not exceed 0.5 percent of the PLS and inert material. Seeding rates will be given in pounds of PLS per acre. The seed mix will be measured and packaged by the seed supplier. Seeds will be broadcast using a tractor-mounted seeder and then tracked in with machinery. Plugs will be hand planted. Seeding will take place in the fall prior to the first rain. Hand planting will be conducted in the spring as the soil temperatures warm.

3.6 Project Objectives

The Project applicant has identified the following objectives:

- Provide a local construction material supply to serve local and regional market demands.
- Provide a local source of materials for emergency jobs (during federal, State, or County declared emergencies) and other construction jobs requiring nighttime work.
- Extend the life of the quarry to extract additional superior materials from the site.
- Contribute to the improvement of the Lassen County economy by expanding an existing project that increases sales taxes.
- Expand an existing quarry operation without the need for either a County General Plan or Zone Amendment.

3.7 Required Approvals

Lassen County is considered the Lead Agency under CEQA and is responsible for reviewing and certifying the adequacy of this DSEIR. Responsible agencies are those agencies that have discretionary approval over one or more actions involved with the development of the proposed Project site. Trustee agencies are state agencies having discretionary approval or jurisdiction by

law over natural resources affected by the project. Prior to development of the proposed Project, a number of discretionary permits and approvals must be obtained, from local and State agencies, as listed below. This DSEIR and Final SEIR will be relied on by the County and other responsible agencies when determining whether to issue discretionary approvals to implement the project. To implement the proposed Project, the mine operator will need to obtain, at a minimum, the following discretionary permits/approvals.

- Conditional Use Permit Amendment, Lassen County Planning Commission and Board of Supervisors for the proposed operational changes.
- Reclamation Plan Amendment , Lassen County Planning Commission and Board of Supervisors and Department of Conservation, Division of Mine Reclamation (DMR).
- Permits for Operation, Lassen County Air Pollution Control District (APCD).

4.0 ENVIRONMENTAL SETTING, IMPACT ANALYSIS, AND MITIGATION MEASURES

4.1 Introduction

Chapter 4, *Environmental Setting, Impact Analysis, and Mitigation Measures*, contains 14 topical sections that evaluate the direct and indirect environmental impacts of the proposed Project. Cumulative impacts are discussed and evaluated in Chapter 5, *Other CEQA Considerations*. The chapter is organized as follows:

- Aesthetics and Visual Resources (Section 4.2)
- Agriculture and Forestry Resources (Section 4.3)
- Air Quality (Section 4.4)
- Biological Resources (Section 4.5)
- Cultural and Tribal Cultural Resources (Section 4.6)
- Energy (Section 4.7)
- Geology and Soils (Section 4.8)
- Greenhouse Gas Emissions (Section 4.9)
- Hazards and Hazardous Materials (Section 4.10)
- Hydrology and Water Quality (Section 4.11)
- Land Use and Planning (Section 4.12)
- Noise (Section 4.13)
- Transportation (Section 4.14)
- Wildfire (Section 4.15)

The following sections describe the format of the environmental analysis, the thresholds of significance, and the methodology of determining the significance of impacts.

4.1.1 Format of the Environmental Analysis

Each topical section of this DSEIR is organized into the following subsections:

- *Environmental Setting.* The environmental settings present the existing environmental conditions, in accordance with CEQA Guidelines §15125. The subsection describes the baseline conditions against which the environmental impacts associated with the proposed project and the potential future development of the property are assessed.
- *Regulatory Setting.* The regulatory settings describe the laws, regulations, and policies that affect the resource or the assessment of impacts on the specific resource. The regulatory setting subsection establishes the regulatory framework for the analysis of each resource. This subsection is divided into federal, State, and Local regulations.
- *Previous CEQA Review.* The previous CEQA review presents the impacts and mitigation measures contained in the three previous EIRs prepared for mining operations at the Project site.

- *Threshold of Significance.* Thresholds of significance describe the criteria used to determine the significance of impacts. The thresholds and criteria for determining the significance of impacts for analysis are derived from the Environmental Checklist in Appendix G of the CEQA Guidelines (§§15000 to 15387) and other resource-specific sources as described in each subsection.
- *Impact Analysis.* The impact analysis presents thresholds of significance used and discusses potential effects of the proposed project on the existing environmental conditions (in accordance with CEQA Guidelines §§15126.2(a) and 15143).
- *Mitigation Measures.* Mitigation measures provide measures to reduce potentially significant effects associated with the proposed project to the extent feasible (in accordance with CEQA Guidelines §§15002(a)(3), 15021(a)(2), and 15091(a)(1)).
- *Level of Significance after Mitigation.* This subsection describes whether mitigation measures feasibly would or would not substantially reduce or avoid an impact. This subsection is presented in accordance with CEQA Guidelines §§15091(a)(1), 15092(b)(2)A), and 15126.2(b), which require identification of impacts capable of avoidance or mitigation, as well as those that cannot be avoided.

4.1.2 Impact Significance Conclusions

This DSEIR evaluates whether the proposed Project and alternatives would cause a change in the environment. Conclusions reached are based on information in the record, including scientific and factual data as well as professional knowledge and judgment. Consistent with CEQA and the CEQA Guidelines, significance conclusions are characterized as one of the following:

- *No Impact.* This signifies that a project or an alternative would not cause any change in the environment relative to the applicable significance criterion; under these circumstances, no mitigation measures would be required or may be imposed, and the project or alternative could not cause or contribute to any cumulative effect.
- *Less Than Significant Impact.* This signifies that a project or an alternative could cause an adverse change in the environment, but not one that would be substantial, relative to the applicable significance criterion. Under these circumstances, no mitigation measures would be required or may be imposed. The analysis considers whether the project or alternative could cause or contribute to a potential cumulative effect.
- *Less Than Significant with Mitigation Incorporated.* This signifies that a project or an alternative could cause an adverse change in the environment that would be substantial relative to the applicable significance criterion, but that the implementation of one or more feasible mitigation measures would reduce the significance of the impact below the established threshold. The analysis considers whether the project or alternative could cause or contribute to a potential cumulative effect.
- *Significant and Unavoidable.* This signifies that a project or an alternative could cause a substantial adverse change in the environment relative to the applicable significance

criterion; however, either no feasible mitigation measures are available, or, even with implementation of feasible mitigation measures, the significance of the impact would remain above the established threshold. The analysis considers whether the project or alternative could cause or contribute to a potential cumulative effect.

- *Cumulatively Considerable.* This signifies that a project-specific or alternative-specific contribution to a significant cumulative effect would be considerable when viewed in connection with the incremental impacts of past projects, the impacts of other current projects, and the impacts of reasonably foreseeable probable future projects (as defined in CEQA Guidelines §15130).

For each impact identified as significant, the DSEIR provides mitigation measures to reduce, eliminate, or avoid the adverse effect. The effectiveness of recommended mitigation measure has been evaluated by analyzing the impact remaining after the implementation of the measure. In some cases, the implementation of more than one mitigation measure may be needed to reduce the significance of an impact below an established threshold. Whether the mitigation would reduce the impact to a less than significant level successfully is stated in the DSEIR.

4.2 Aesthetics and Visual Resources

The physical expansion of the site and extending the life of the mining operations are substantial changes proposed that will require revision of the previous EIR due to the involvement of potentially new significant environmental effects pertaining to aesthetics and visual resources which could lead to a substantial increase in the severity of previously identified significant effects under CEQA Guidelines §15162.

This section provides a description of existing visual conditions in the Project area, summarizes the previous CEQA analyses of the visual impacts of the current operation at the Project site, and describes the changes to those conditions that would result from the Project. This section also includes Project-related impacts. The analysis is based, in part, on information contained in the *Viewshed Technical Summary, Ward Lake Quarry, Lassen County, California* (VESTRA, 2020) (refer to Appendix C).

4.2.1 Environmental Setting

The Project site is located at the base of the southwestern slope of Shaffer Mountain at an elevation of approximately 4,300 feet above mean sea level (msl). The site lies on the east side of Ward Lake Road, approximately 1 mile north of Center Road (A27). The existing visual character of the site is that of brush and disturbed mining lands with moderate to steep topography. The Bureau of Land Management owns an additional 46-acre quarry (Section 4 Pit) directly south of the Project site. Section 4 Pit is also operated by Hat Creek Construction & Materials, Inc. Much of the Project site is obstructed from short- and long-distance views by a low ridge bordering the northwest side of the asphalt plant, concrete plant, and pond area at an elevation of 4,280 feet above msl. Another ridge at elevation 4,360 shields the site from the southwest to some degree.

The character of the area surrounding the Project site is rural residential with homes on large, agricultural-sized parcels. A total of eight homes are located on Ward Lake Road just south of the Project site. These homes are considered “sensitive receptors” and are shown on Figure 3-10.

The Project is located approximately 4 miles east of the California Correctional Center (CCC). The community of Litchfield is located 3 miles to the southeast and is shielded from the Project site by topography. The City of Susanville is located approximately 14 miles to the west. The community of Litchfield contains numerous residences along Center Road (A27) which becomes Highway 395 in the center of town. Highway 395 is not a designated scenic highway.

Within the immediate Project vicinity, the only source of nighttime lighting is from residences located on Ward Lake Road. At night, light from homes in the community of Litchfield, located approximately 3 miles southeast of the Project site, is also visible. In the larger project area, a major existing source of nighttime lighting includes the CCC, located approximately 4 miles west of the Project site. The CCC uses exterior lighting that is bright and visible from a large area.

The facility was approved for nighttime operations in 2019 and currently uses artificial lighting in the morning and evening to meet the 6:00 a.m. to 7:00 p.m. operating window. The current condition of the proposed expansion area is undeveloped open space with sparse vegetation composed of low sage. The lack of vegetation is considered part of the current visual quality of the site.

4.2.2 Regulatory Setting

The following is a description of federal, State, and local environmental laws and policies that are relevant to the CEQA review process for the proposed expansion area.

Federal

National Scenic Byways Program

The National Scenic Byways Program is part of the U.S. Department of Transportation, Federal Highway Administration (FHWA). Established in Title 23, Section 162 of the United States Code, the program is a grass-roots collaborative effort established to help recognize, preserve, and enhance selected roads throughout the United States. FHWA's May 18, 1995, interim policy sets forth the procedures for the designation by the U.S. Secretary of Transportation of certain roads as National Scenic Byways or All-American Roads based on their archaeological, cultural, historic, natural, recreational, and scenic qualities. There are 150 such designated byways in 46 states. There are no federally designated byways in the Project vicinity.

State

California Scenic Highway Program

California's Scenic Highway Program was created by the legislature in 1963. Its purpose is to protect and enhance the natural scenic beauty of California highways and adjacent corridors, through special conservation treatment. The State laws governing the Scenic Highway Program are found in the Streets and Highways Code, Sections 260 through 263. Caltrans has compiled a list of State highways that are designated as scenic and county highways that are eligible for designation as scenic. There are no State-designated scenic highways in the Project vicinity.

Local

Lassen County General Plan

There are no specific General Plan policies that relate to aesthetics. The *Standish-Litchfield Area Plan* identifies scenic corridors. The proposed Project is not in a scenic corridor identified in the Area Plan.

Lassen County Code

Section 18.108.155, *Lighting*, of the Lassen County Code contains the following policy related to aesthetics that would apply to the proposed project:

"Unless otherwise provided in this title, the following lighting requirements shall apply: All lighting, exterior and interior, shall be designed and located so as to confine direct lighting to the premises. A light source shall not shine upon or illuminate directly on any surface other than the area required to be lighted. No lighting shall be of the type or in a location such that constitutes a hazard to vehicle traffic, either on private property or on abutting streets."

4.2.3 Previous CEQA Reviews

1981 EIR

Visual impacts of the initial mining operation at the site (excavation, crushing, stockpiling, and hauling of materials as well as the operation of asphalt concrete batch plant) were analyzed in the 1981 EIR. The EIR determined that increased traffic and the proposed plant activities (even though not directly adjacent to occupied lands) would have an indirect long-term effect on the existent environmental setting (aesthetics) which could not be circumvented. Crusher and hot plant operations are functional rather than decorative. Visual impacts were determined to be significant and unavoidable. The following mitigation was included in the 1981 EIR to reduce the visual impacts of the project:

“Aesthetic mitigation is limited to the physical location of the proposed project. An outcropping (ridge) of rock exists between County Road 308 (Ward Lake Road) and the fairly level area behind it designated for the plant sites which will, in part, limit some of the direct view of the operations. Areas designated as materials sources are visible from the valley floor in some sections. Mitigation of these areas would consist of the implementation of the reclamation plan calling for reshaping and reseeding of excavated areas on a continuing basis. The ridge between County Road 308 and the plant site is not a part of the materials source and would not be disturbed by the applicant.”

1997 EIR

Visual impacts of the previous spatial expansion (which included the addition of the concrete batch plant and increase in height of the exposed rock quarry face) were evaluated in the 1997 EIR. The 1997 EIR determined that impacts to long-distance views, including those from Center Road (A27), would be less than significant. In addition, impacts to mid-range views, including those approximately 2 miles from the site along Center Road (A27) and Ward Lake Road, were determined to be less than significant. The EIR determined that views from homes and residential properties closest to the entrance to the quarry off of Ward Lake Road would be significant due to the close proximity of the quarry to viewers which would cause the quarry to dominate views. Short-term impacts were determined to be significant and unavoidable and long-term impacts were determined to be mitigable upon reclamation. Mitigation measures for impacts to aesthetics and visual resources in the 1997 EIR included:

- *Reclamation measures recommended in Vegetation/Wildlife chapter (measure 1a).*
- *Reclamation of graded areas: The intent of the Reclamation Plan shall be to recreate to the extent possible a viable, self-sustaining plant community similar to that which existed prior to mining.*
- *Sand and Gravel Excavation Areas: These areas shall be regraded to maximum slopes of 2H:1V, shall be resoiled with adequate growth medium to support vegetation including fines from the crusher and stockpiled topsoil and shall be vegetated with native species including sage, bitterbrush, and rabbit brush. The success of revegetation in these areas shall be monitored by qualified personnel with reports submitted to the County Community Development Department at least once per year for five years. The final approved species list and planting density must be approved by the County in consultation with the Department of Fish and Game.*

- *Rock Quarry Area:* This area shall be regraded to a maximum overall slope of 2H:1V and shall be benched with minimum 10 foot wide benches at vertical intervals appropriate for the type of material, but not greater than 15 feet. The benches shall be sloped to drain toward the hillside, shall be resoiled with adequate growth medium to support vegetation including fines from the crusher and stockpiled topsoil and revegetated using native range greases, shrubs, and trees if they can be supported.
- *The operator shall institute a test plot program on the first available rock face bench to determine the best species mix and planting scheme for subsequent benches. The test plots shall be set up and monitored by qualified personnel with reports submitted to the County Community Development Department at least once per year for five years. The final approved species list and planting density must be approved by the County in consultation with the Department of Fish and Game.*
- *Timing/Phasing of Reclamation:* Reclamation of sub-areas shall take place in a phased manner where possible as excavation is completed.
- *Protection of Replanted Areas:* Replanted areas shall be protected by fencing intended to exclude livestock and deer until vegetation is established. Perimeter livestock fencing shall be provided and shall be four wires maximum, bottom wire smooth and no closer than 18 inches to the ground with total fence height not to exceed 42 inches. More site-specific deer proof fencing shall also be provided directly around replanting areas.
- *Paint concrete plant to blend with surrounding background color.*

2019 EIR

The 2019 EIR analyzed the impact to visual resources from the extension of quarry operating hours to 24 hours per day and the impact of resultant nighttime truck traffic. The 2019 EIR found that the Project would alter the visual character of the site through the use of nighttime lighting during 24-hour operations; and also, that the 24-hour operations would result in an increase in nighttime truck traffic on Project-area roads. The Project would result in increased nighttime traffic headlight use on roadways in the Project area, specifically Ward Lake Road and Center Road (A27). Homes along Ward Lake Road are as close as 60 feet from the roadway. Headlight use would not impact large-scale nighttime views, but would have the potential to significantly degrade the existing visual quality of areas close to the roadways at night.

The County found that impacts to aesthetics and visual resources, after implementation of mitigation measures, would be significant and unavoidable to residences along Ward Lake Road. The following mitigation measures were required:

- *Direct lighting internally into the site and berm site areas to minimize impact when possible.*
- *Install fully shielded (pointing downward) lighting fixtures.*
- *Use only low beams on trucks in residential areas during nighttime operations.*

4.2.4 Thresholds of Significance

In accordance with CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. An EIR is required to focus

on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the project. The following significance thresholds related to *Aesthetic and Visual Resources* have been derived from Appendix G of the CEQA Guidelines:

- *Have a substantial adverse effect on a scenic vista.*
- *Substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.*
- *In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings.*
- *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.*

4.2.5 Methodology

The visual impacts of the existing operation at the Project site have been analyzed in previous EIRs. The Project elements that will affect aesthetic and visual resources at the Project site include the physical expansion of site operations which would result in vegetation removal, ground disturbance, changes in topography, and equipment use on an additional 78.6 acres. A viewshed analysis was completed to analyze the impacts to scenic vistas and resources from the expansion of the site. The visual simulation analysis evaluated the impacts to the visual resources based on site topography and a north-south observation location, representing each end of the proposed expansion area.

The shape of a terrain surface affects which portions of the surface area can be seen from any given point. To assess the visual components of the proposed Project, Geographic Information Systems (GIS) was used to evaluate visibility across the project area from various locations. GIS is a collection of computer hardware, software, and geographic data for capturing, managing, analyzing, and displaying all forms of geographically referenced information. ArcGIS is a Geographic Information System package developed by Environmental Systems Research Institute (ESRI).

A viewshed identifies the locations in a given area that can be seen from one or more observation points. The elevation data used to perform viewshed analyses are raster-based data. Raster data is data in which a surface is divided into a grid and each cell in the grid contains an elevation value. The resolution of raster data is the distance, in surface units, of the sides of each cell in the grid. An example of this is the elevation data provided by the U.S. Geological Survey (USGS) for use in GIS. These data sets are commonly provided at either a 10-meter or 30-meter resolution. Viewshed analysis provides a value that indicates how many observer points can be seen from each location. If you have only one observer point, each cell from which the observer point can be seen is given a value of one. All cells from which the observer point cannot be seen are given a value of zero. Observer points can be points or linear features.

The product of the viewshed analyses was the creation of 10-meter-resolution raster data layers showing visibility from two locations in the proposed mining area. This is from the proposed

mining area outward (rather than from the outside looking inward toward the proposed mining area).

4.2.6 Impact Analysis

24-hour operation of the plant will continue and is considered a baseline condition. The increased nighttime traffic will continue and is considered a baseline condition. Current operations of the plant and processing area will continue. Portions of the current quarry area will be reclaimed as the new area is mined.

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

Areas of No Project Impact

As required by CEQA Guidelines §15082, the County issued a Notice of Preparation (NOP) on April 28, 2021 that summarized the proposed Project, stated its intention to prepare an EIR, and requested comments regarding the scope and content of the EIR from responsible and trustee agencies. In the course of the County's initial evaluation, certain impacts of the proposed Project were found to not to be significant because of the inability of a project of this scope to create such impacts or the absence of project characteristics producing effects of this type. The effects determined not to be significant are not required to be included in primary analysis sections of the DSEIR. As such, the following impacts either are not applicable to the proposed Project or are not reasonably foreseeable and are not addressed further within this section:

- *Substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.*

A significant impact would occur if the proposed Project would result in the removal or substantial adverse change of one or more features that contribute to the valued visual character or image of the neighborhood, community, or localized area, including, but not limited to, landmarks (designated), historic resources, trees, and rock outcroppings.

The proposed Project is not located in an area that is designated as scenic highway, although the project is visible from portions of Highway 395 for a distance of approximately 2 miles, Highway 395 is not a designated scenic highway. The Project does not impact a designated landmark, historic resource, trees, or rock outcroppings of valued visual character. Therefore, no impact to scenic resources would occur.

Project Impacts

Impact 4.2-1: Have a substantial adverse effect on a scenic vista.

As noted above under Subsection 4.2.2, *Regulatory Setting*, the area in the vicinity of the mine site is not identified as an area of scenic vistas. There are two active mines currently operating adjacent to the proposed expansion. These include the existing Ward Lake Quarry and smaller aggregate mine located on BLM-administered land immediately south of Ward Lake Quarry. The currently disturbed area of Ward Lake Quarry is 138 acres. The disturbed acreage of the BLM mine is approximately 50 acres.

Based on the simulation conducted, the proposed quarry expansion area will be visible from the same locations visible due to current operations. A significant impact would occur if the project would substantially obstruct, interrupt, or detract from a valued focal and/or panoramic vista from a public road, a trail within an adopted county or state trail system, a scenic vista or highway, or a recreational area. No designated scenic highways or rivers are located in the vicinity of the proposed Project.

The resulting data is illustrated on Figures 4-1 and 4-2. As is currently the case with the current site activities, the mine expansion is visible from areas to the west but is protected from eastern view by the ridge. The total linear feet from the viewshed analysis, where the proposed mining area is visible from Highway 395 within five miles of the proposed project area, is shown in Table 4-1. This is not anticipated to increase with implementation of the proposed quarry expansion.

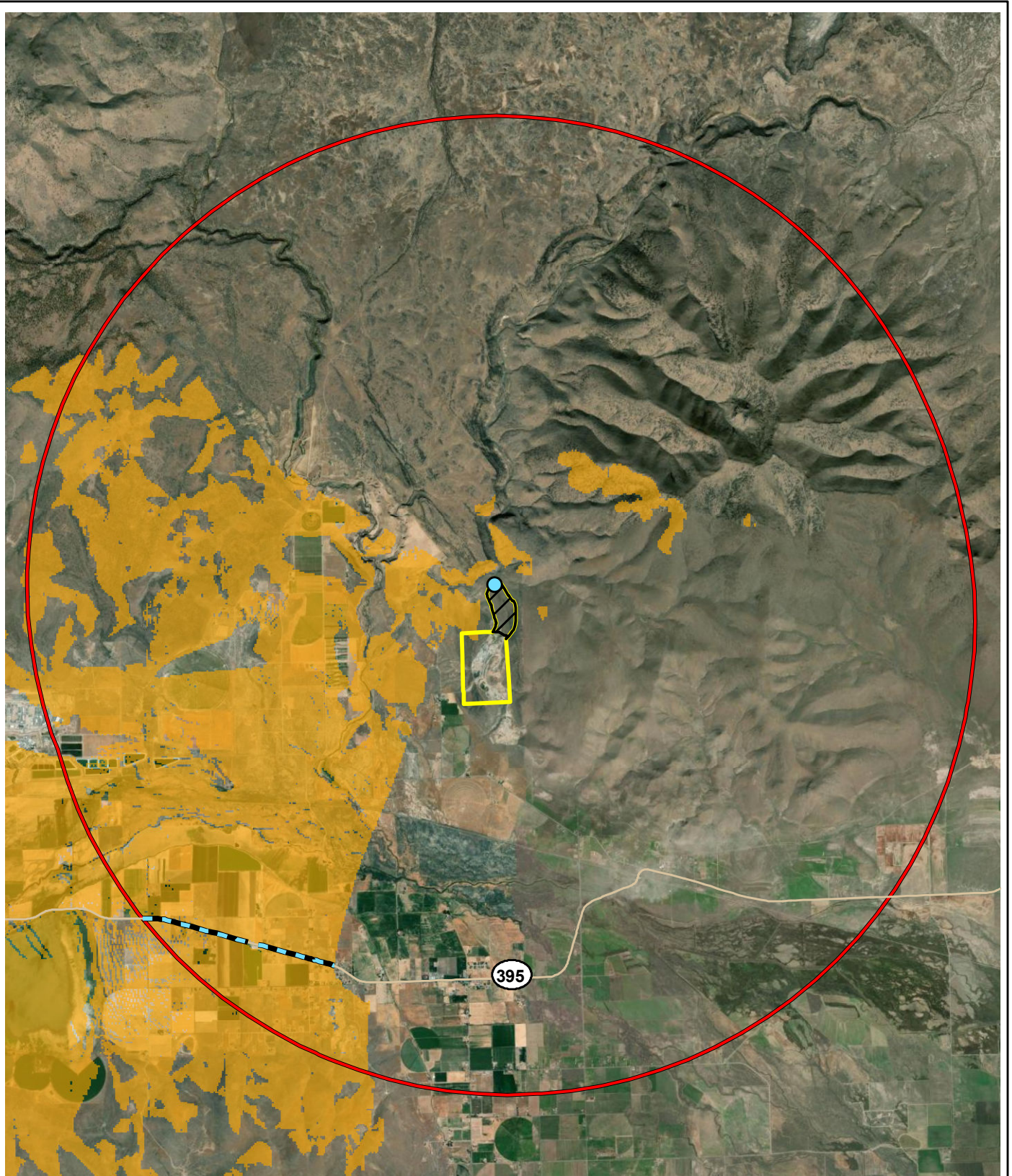
Table 4-1 VIEWSHED STATISTICS	
Observation Location	Linear Feet of Highway 395 within 5 Miles of Project
North Observation Point	10,702
South Observation Point	5,974
Source: VESTRA, 2020.	

The existing mining area of the quarry is visible from Highway 395 for a total of up to 2 miles. The expansion area would not be visible from additional areas. Highway 395 is not a designated scenic highway. The site does not obstruct, interrupt, or detract from a valued focal point or panoramic vista, trail, or recreation area. Impacts are less than significant in this regard.

Impact 4.2-2: In non-urbanized areas, substantially degrade the existing visual character or quality of the public views of the site and its surroundings.

A significant impact would occur if the proposed Project would introduce features that would detract from or contrast with the existing visual character and/or quality of a neighborhood, community, or localized area by conflicting with important visual elements or the quality of the area (such as theme, style, setbacks, density, size, massing, coverage, scale, color, architecture, building materials, etc.). Implementation of the proposed Project will alter the visual character of the site by physical disturbance of an additional 78.6 acres. The Project site currently has lighting fixtures that are used during the periods of 24-hour operation. This will not be expanded as the processing area will not change.

The proposed Project area is estimated to be visible from approximately 55,000 acres, which is not a changeover baseline conditions. Figures 4-1 and 4-2 depicted the estimated areas where the proposed Project will be visible. Much of the surrounding land with visual impacts by the proposed Project is owned and administered by the federal government or State of California for the purpose of resource use; therefore, impacts to a large number of residences is limited.



● North Observation Location

--- Segment of Highway Visible from North Observation Location

— Highway

□ Project Site

▨ Proposed Expansion Area

□ 5-Mile Buffer Around Proposed Expansion Area

■ Viewshed Area Visible from North Observation Location



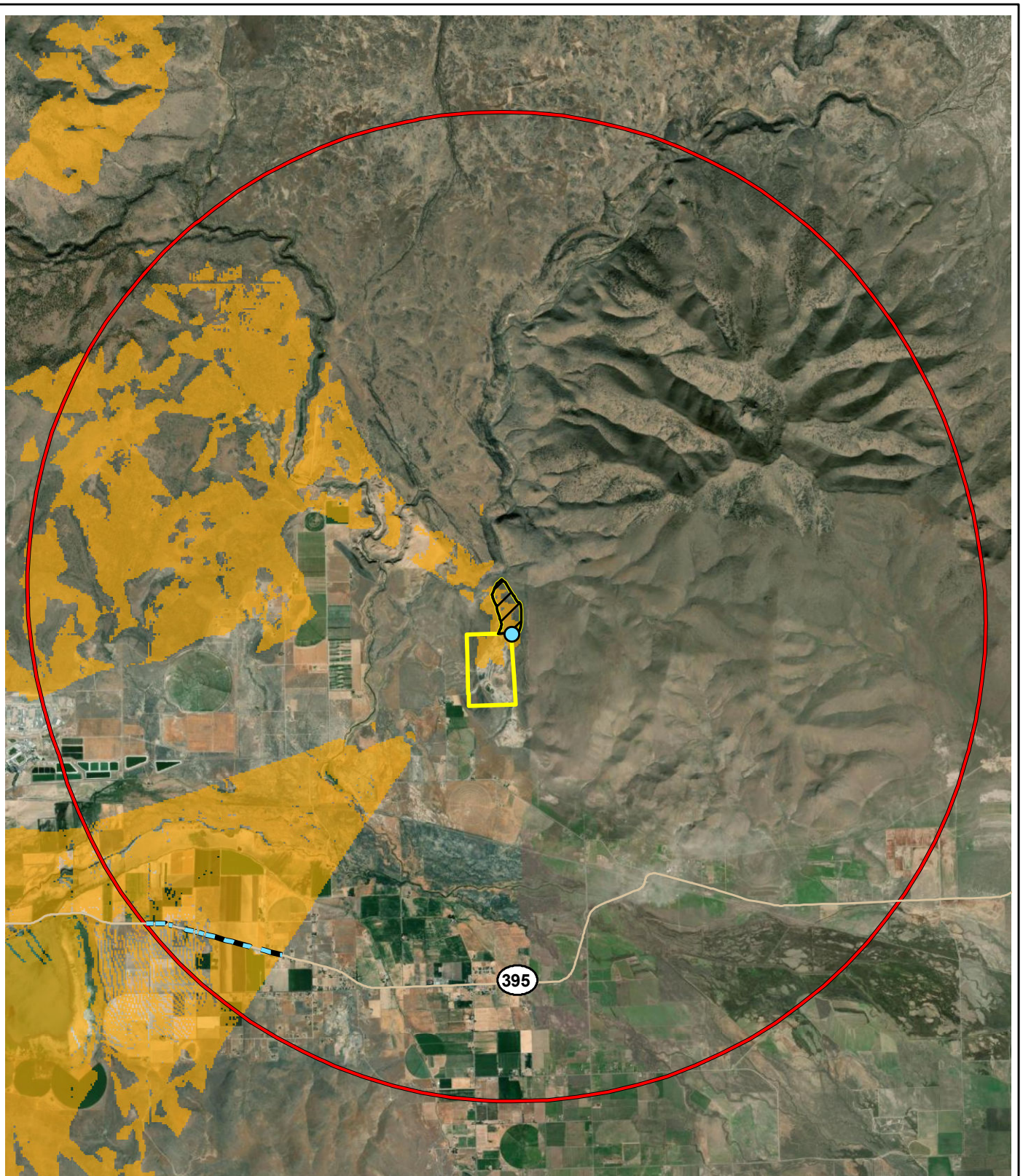
0 0.75 1.5 3 Miles



FIGURE 4-1
VISUAL PROJECTION WITHIN 5 MILES
OF NORTH OBSERVATION LOCATION
WARD LAKE QUARRY
SUSANVILLE, CALIFORNIA

SOURCE: DIGITALGLOBE 2018 AERIAL PHOTOGRAPH

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● South Observation Location

--- Segment of Highway Visible from South Observation Location

— Highway

□ Project Site

▨ Proposed Expansion Area

□ 5-Mile Buffer Around Proposed Expansion Area

■ Viewshed Area Visible from South Observation Location



0 0.75 1.5 3 Miles



SOURCE: DIGITALGLOBE 2018 AERIAL PHOTOGRAPH

FIGURE 4-2
VISUAL PROJECTION WITHIN 5 MILES
OF SOUTH OBSERVATION LOCATION
WARD LAKE QUARRY
SUSANVILLE, CALIFORNIA

The towns of Litchfield and Standish are shielded from the mine by topographic features. The visual analysis determined that the proposed Project would result in impacts to lands to the west of the site. The majority of the parcels affected are large-tract agricultural properties. Therefore, less than significant impacts would occur in this regard.

Impact 4.2-3: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

The existing quarry operation is permitted to operate for 24-hour periods as needed. Light and glare impacts have been previously analyzed in the 2019 EIR. This represents the baseline condition and will not be modified with implementation of the proposed Project. No additional sources of lighting are planned or anticipated in the expansion area. The proposed Project will not create a substantial new source of light or glare. Less than significant impacts would occur in this regard.

4.2.7 Mitigation Measures

No mitigation measures are required.

4.2.8 Level of Significance after Mitigation

No mitigation measures are required. Impacts would be less than significant.

4.3 Agriculture and Forestry Resources

The expansion of the mining area of the operation to include an additional 78.6 acres and increase in the life of the mine to 2050 are substantial changes proposed in the Project that will require major revisions of the previous EIR due to the involvement of potentially new significant environmental effects pertaining to agriculture and forestry resources under CEQA Guidelines §15162. An analysis of impacts to agriculture and forestry resources was not included in the 2019 EIR since the previous project did not include a change in the mining area.

The purpose of this section is to determine the extent to which the proposed Project contributes to the physical deterioration of agriculture or forestry resources. This section describes the agricultural resources within the project study area, and the applicable regulations that govern those resources. The analysis includes a discussion of the potential agricultural productivity of the onsite soils and the potential impacts the proposed Project may have on the continued use of surrounding properties for agricultural production.

4.3.1 Environmental Setting

The *Lassen County General Plan* designation for the project site is “Extensive Agriculture.” Surrounding properties are designated as “Extensive Agriculture”, “Open Space”, “Agricultural Residential”, and “Mountain Resort.”

The dominant habitat type identified through the California Wildlife Habitat Relationships (CWHR) classification is sagebrush (Mayer and Laudenslayer, 1988). Sagebrush habitat is usually large, open, and often discontinuous and stands are usually dominated by big sagebrush (*Artemisia tridentata*). This habitat occurs over a range of middle and high elevations. Sagebrush is often mixed with other similar shrub species, such as rabbitbrush (*Chrysothamnus* spp.), horsebrush (*Tetradymia* spp.), and bitterbrush (*Purshia* spp.). In some places, stands may have an understory of perennial grasses and forbs. The expansion will remove an additional 78.6 acres of this habitat type.

The site is not covered by a Williamson Act contract. In addition, the proposed Project is not zoned as forestland, timberland, or timberland production.

4.3.2 Regulatory Setting

The following is a description of federal, State, and local environmental laws and policies that are relevant to the CEQA review process.

Federal

Farmland Protection Policy Act (7 U.S.C. §4201)

The purpose of the Farmland Protection Policy Act (FPPA) is to minimize the extent to which Federal programs contribute to the unnecessary and irreversible conversion of farmland to non-agricultural uses. It additionally directs Federal programs to be compatible with State and local policies for the protection of farmlands. Congress passed the Agriculture and Food Act of 1981 (Public Law 97-98) containing the FPPA—Subtitle I of Title XV, §1539-1549. The final rules and regulations were published in the Federal Register on June 17, 1994.

The FPPA is intended to minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to non-agricultural uses. It assures that, to the extent possible, Federal programs are administered to be compatible with State, local units of government, and private programs and policies to protect farmland. Federal agencies are required to develop and review their policies and procedures to implement the FPPA every two years. The FPPA does not authorize the Federal Government to regulate the use of private or non-Federal land or, in any way, affect the property rights of owners.

For the purpose of FPPA, farmland includes Prime Farmland, Unique Farmland, and Farmland of Statewide or Local Importance. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forest land, pastureland, cropland, or other land, but not water or urban built-up land. Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to non-agricultural use and are completed by a Federal agency or with assistance from a Federal agency.

United States Department of Agriculture, Natural Resources Conservation Service

The U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), maps soils and farmland and provides science-based soil information. The NRCS manages the Farmland Protection Program, which provides funds to conserve productive farmland.

State

California Farmland Mapping and Monitoring Program

The Farmland Mapping and Monitoring Program (FMMP), which monitors the conversion of the State's farmland to and from agricultural use, relies on information from the NRCS soils surveys, NRCS land inventory and monitoring criteria, and land use and water availability. Topography, climate, soil quality, and available irrigation water all factor into the FMMP farmland classifications.

The FMMP was established by the California Department of Conservation (DOC), under the Division of Land Resource Protection. Important Farmland Maps are compiled by the FMMP pursuant to §65570 of the California Government Code. The FMMP is an informational service only and does not constitute state regulation of local land use decisions. Under the FMMP, “Important Farmland Categories” were established based on soils characteristics that have significant agricultural production values. Categories mapped by the FMMP are as follow:

- *Prime Farmland.* Prime Farmland is land that has been used for irrigated agricultural production and meets the physical and chemical criteria for Prime Farmland as determined by the USDA, NRCS. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- *Farmland of Statewide Importance.* Farmland of Statewide Importance is similar to Prime Farmland but generally includes steeper slopes or less ability to store soil moisture. In order to be classified as Farmland of Statewide Importance, the land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

- *Unique Farmland.* Unique Farmland is farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards. Land must have been cropped at some time during the four years prior to the mapping date.
- *Farmland of Local Importance.* Farmland of Local Importance is land important to the local economy as determined by the County Board of Supervisors and a local advisory committee. This land includes dryland grain producing lands and farmlands that are presently irrigated but do not meet the soil characteristics of Prime Farmland or Farmland of Statewide Importance.
- *Grazing Land.* Grazing Land is land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.
- *Urban and Built-up Land.* Urban and Built-Up Land is land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.
- *Other Land.* Other Land is land not included in any other mapping category. Common examples include low-density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry, or aquaculture facilities; strip mines; borrow pits; and water bodies smaller than forty acres.
- *Water.* This category includes perennial water bodies with an extent of at least 40 acres.

California Land Conservation Act

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, is promulgated in California Government Code §51200-51297.4, and therefore is applicable only to specific land parcels within the State of California. The Williamson Act enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space uses in return for reduced property tax assessments. Private land within locally designated agricultural preserve areas is eligible for enrollment under Williamson Act contracts. The Williamson Act program is administered by the CDC, in conjunction with local governments, which administer the individual contract arrangements with landowners. The landowner commits the parcel to a 10-year period wherein no conversion out of agricultural use is permitted. Each year, the contract automatically renews unless a notice of non-renewal or cancellation is filed. In return, the land is taxed at a rate based on the actual use of the land for agricultural purposes, as opposed to its unrestricted market value. An application for immediate cancellation can also be requested by the landowner, provided that the proposed immediate cancellation application is consistent with the cancellation criteria stated in the California Land Conservation Act and those adopted by the affected county or city. Non-renewal

or immediate cancellation does not change the zoning of the property. Participation in the Williamson Act program is dependent on county adoption and implementation of the program and is voluntary for landowners.

The Williamson Act states that a board or council by resolution shall adopt rules governing the administration of agricultural preserves. The rules of each agricultural preserve specify the uses allowed. Generally, any commercial agricultural use will be permitted within any agricultural preserve. In addition, local governments may identify compatible uses permitted with a use permit.

California Government Code §51238 states that, unless otherwise decided by a local board or council, the erection, construction, alteration, or maintenance of electric and communication facilities, as well as other facilities, are determined to be compatible uses within any agricultural preserve. Also, §51238 states that board of supervisors may impose conditions on lands or land uses to be placed within preserves to permit and encourage compatible uses in conformity with §51238.1.

Further, California Government Code §51238.1 allows a board or council to allow as compatible any use that without conditions or mitigations would otherwise be considered incompatible; however, this may occur only if that use meets the following conditions:

- The use will not significantly compromise the long-term productive agricultural capability of the subject contracted parcel or parcels on other contracted lands in agricultural preserves.
- The use will not significantly displace or impair current or reasonably foreseeable agricultural operations on the subject contracted parcel or parcels or on other contracted lands in agricultural preserves. Uses that significantly displace agricultural operations on the subject contracted parcel or parcels may be deemed compatible if they relate directly to the production of commercial agricultural products on the subject contracted parcel or parcels or neighboring lands, including activities such as harvesting, processing, or shipping.
- The use will not result in the significant removal of adjacent contracted land from agricultural or open-space use.

The proposed Project site is not under a Williamson Land Use contract.

Farmland Security Zone Contract

The CDC passed the Farmland Security Zone legislation (Govt. Code §51296) in 1998. The Farmland Security Zone allows counties to establish an additional program for farmlands to enter into contracts with the State. This legislation allows landowners whose land is under a Williamson Act contract to petition to the county board of supervisors to annul the Williamson Act contract for a Farmland Security Zone Contract. A Farmland Security Zone Contract is a 20-year contract that allows the property owner to receive 35 percent more in tax savings than a Williamson Act contract. Both of these contracts require that lands be within an established Agricultural Preserve. Agricultural lands that are not in a preserve face the greatest threat of conversion, as they are assessed higher property taxes due to their proximity to urbanization. The proposed Project site is not under a Farmland Security Zone contract or within an agricultural preserve.

Forest Land and Timberland

Public Resources Code §12220(g) defines Forest Land as “*land that can support 10% native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.*”

Public Resources Code §4526 defines timberland as “*land, other than land owned by the federal government, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees.*”

Government Code §51104(g) defines Timberland Production Zone (TPZ) as “*an area which has been zoned pursuant to [Government Code] §§51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h).*”

Local

Lassen County General Plan

The following General Plan objectives and policies are pertinent to the agricultural resources evaluation for the proposed Project:

GOAL A-1: Conservation of productive agricultural lands and lands having substantial physical potential for productive agricultural use, and the protection of such lands from unwarranted intrusion of incompatible land uses and conversion to uses which may obstruct or constrain agricultural use and value.

- Policy AG-1: The County recognizes that land having the physical characteristics (e.g., soil) for production of agricultural crops and livestock is a resource of significant value which needs to be protected for its economic value, its contribution to the character of the community, and its environmental and scenic values.
- Policy AG-2: Agriculture and livestock management, and related activities consistent with the zoning regulations established by the County, are considered by the County to be compatible activities in areas identified as “open space”. Exceptions to this policy may be made in cases where the Board of Supervisors or the Planning Commission determines, in consideration of specific resource issues and management objectives in specified areas, that certain agricultural activities are not compatible and should be excluded. The recognition and consideration of the open space character and values of agricultural and rangeland areas shall not be construed to be contrary to resource production and management practices (including agriculture and livestock grazing) which may be allowed by the County subject to the adopted zoning of those areas and the lawful exercise of the County's land use authority.
- Policy AG-3: Residential development in agricultural areas shall be discouraged because it disrupts the surrounding productive activity of ranches and agricultural operations. Future residential development, with the exception of building permits on an individual basis, should be relegated to the expansion of existing communities and residential areas, including areas designated as “residential” by the County in the General Plan or an area plan even though those areas may not yet be developed.

- Policy AG-4: In order to support the existing and future economic value and viability of agricultural lands, including grazing lands, such lands should remain in relatively large units. Except in limited circumstances pursuant to the County's zoning ordinance (e.g., segregation of homesites, use permits, etc.), County zoning and subdivision regulations shall protect agricultural lands by not allowing isolated subdivisions intended primarily for residential use to be developed in areas which are not specifically designated in the General Plan or an area plan for a community development land use (e.g., rural residential) and zoned accordingly.
- Policy AG-5: In order to minimize the disruption and displacement of agricultural operations and lands by non-agricultural development, non-agricultural development in agricultural areas should be directed to: sites where soils do not have significant potential for productive agricultural use; sites least likely to impact productive agricultural uses in the vicinity; sites where, or which are adjacent to where, similar non-agricultural uses already exist; and sites where adequate community services are or will be available.

GOAL A-2: Maintain area plan policies and related land use and resource management decisions which support the agricultural policies of the Agriculture Element.

- Policy AG-6: The policies of area plans relating to agricultural resources are recognized as complimentary to and supportive of the Agriculture Element as they may apply to the land and resources of each particular planning area.

GOAL A-3: Maintain an orderly process and review criteria for the consideration of project proposals which may result in the conversion of agricultural lands to uses which are not primarily agricultural or directly related to agriculture, consistent with related policies of the General Plan which are intended to protect agricultural resources and land uses.

- Policy AG-7: In order to minimize the disruption and displacement of agricultural operations and lands by non-agricultural development, non-agricultural development in agricultural areas should be directed to: sites where soils do not have significant potential for productive agricultural use; sites least likely to impact productive agricultural uses in the vicinity; sites where, or which are adjacent to where, similar non-agricultural uses already exist; and sites where adequate community services are or will be available.
- Policy AG-8: The County recognizes that some agricultural areas may, in the future, be more specifically identified and evaluated for alternative land uses. If it can be demonstrated with findings by the Board of Supervisors that there is adequate justification to consider the conversion of agricultural land, those lands may be considered for a General Plan amendment to redesignate them for a specific nonagricultural land use. The conversion of agricultural lands, including rangeland, to non-agricultural uses may be allowed if and when such proposed conversions are supported by findings based on substantial evidence, and consideration of related policies established by local agricultural industry organizations, which demonstrate consistency with all of the provisions listed below. (Note: Some types of land uses may be specifically exempted by the General Plan or an area plan from full consistency with these agricultural conversion findings, e.g., certain industrial uses.)

-
- a) The conversion is justified by a factor of significant benefit to the community (e.g., facilitating orderly expansion of a community, facilitating construction of a public facility, providing significant employment-generating opportunities, etc.);
 - b) There is a substantial limitation to alternative non-agricultural sites for the proposed land use;
 - c) Conversion will not have a significant adverse impact on agricultural land use, agricultural water supplies, significant wildlife habitat, or other natural resource based uses on adjacent lands;
 - d) Adequate community services to support the proposed use are or will be available at the proposed site; and
 - e) The proposed use is or will be supported by an appropriate land use designation and the establishment of a corresponding zoning district.
- Policy AG-9: When considering proposals for agricultural land conversions and/or associated mitigation measures, the County will recognize that the cumulative impacts from land conversions places an increased burden on the remaining agricultural land to provide environmental quality, wildlife habitat and open space values and may threaten the viability of the remaining agricultural land; therefore, the County will support measures to help minimize the impacts of that burden.
 - Policy AG-10: The County shall not expect or require that agricultural lands bear the burden of fulfilling open space requirements for residential and other forms of community development proposed in or adjacent to agricultural areas.
 - Policy AG-11: Agricultural production and product processing facilities are encouraged by the County and, unlike most general industrial uses, are considered to be related to agricultural uses and, therefore, may be considered for location in areas designated for intensive or extensive agricultural use without being considered as a “conversion” of agricultural land and without all of the required findings set forth in this section for conversions. However, the siting of agricultural production facilities in these areas, when allowed, shall be supported by information and findings which demonstrate that the facility will not substantially interfere with agricultural or other natural resource-based uses on adjacent lands.
 - Policy AG-12: Subject to case-by-case review (including review for compatibility with surrounding agricultural uses), and in compliance with relevant area plan, zoning, permitting and environmental review requirements, the development and operation of the following land uses will typically be deemed to be consistent with the Extensive and Intensive Agriculture land use designations and will not require zoning to an “Industrial” zoning district, nor will they be interpreted by the County to constitute an “agricultural conversion” pursuant to this General Plan:
 - a) processing plants for the production of agricultural products;
 - b) processing plants for the production of natural resource products where the location of the resource is fundamental to the location of processing and packaging facilities (e.g., water bottled at the source, etc.);

- c) mines, the extraction of minerals, and the ancillary processing of mineral materials generated on-site, including the production of asphalt, ready-mix concrete, and similar products;
 - d) sawmills and related timber processing operations;
 - e) geothermal and natural gas wells, hydroelectric projects, and ancillary facilities for the production of energy; and
 - f) uses of similar character as may be determined by the Board of Supervisors.
- Policy AG-13: The operation of a minor non-agricultural activity by the owner of agricultural land on lands designated for agriculture, when such use is clearly subordinate to and does not reduce, constrain, or interfere with agricultural operations on the property or in the vicinity, shall not be interpreted by the County as a “conversion” of agricultural land pursuant to the General Plan. Examples include, but are not limited to, bed-and-breakfast establishments, hunting and other small lodges, guest ranches, and home occupations.

GOAL A-4: Support for the economic viability and continuation of agricultural operations and the protection of agricultural resource lands.

- Policy AG-14: The County shall encourage the on-going review of agriculture-related land use and resource management issues by local organizations representing the agriculture industry (e.g., the Farm Bureau, the Cattlemen's Association), and shall consider their recommendations regarding related land use and resource management policies and actions.
- Policy AG-15: The County supports the consideration of innovative ways to maintain the economic viability of productive agricultural lands, subject to the unique circumstances of each area. Measures may include use of land conservation contracts (e.g., Williamson Act contracts), land banks, transfer of development rights, voluntary conservation easements, and use of buffer areas between agricultural lands and developing areas.
- Policy AG-16: Where proposed residential, commercial, or industrial development abuts lands devoted to agriculture production, the non-agricultural uses shall be required to incorporate buffer areas to mitigate potential land use conflicts as conditions of approval for subdivisions or use permits. The type and width of buffer areas shall be determined based on the character, intensity, and sensitivity of the abutting land uses.

GOAL A-5: Productive cooperation with and from Federal and state agencies which manage natural resources in Lassen County and improved consistency in resource management objectives, policies, and programs.

- Policy AG-17: The County supports grazing practices on private lands and lands managed by state and Federal agencies which support the long-term health and sustainability of rangeland resources.

- Policy AG-18: The County supports cooperative efforts between private sector interests and public agencies that incorporate economic viability while addressing environmental resource concerns such as the Eagle Lake I Pine Creek CRMP.
- Policy AG-19: The County advocates grazing policies on Federal and state lands which support the economic viability of related private livestock operations while maintaining the long-term productivity of rangeland ecosystems. Proposed changes in resource management policies regarding rangeland use need to consider and mitigate potential economic, social, and cultural impacts to Lassen County citizens and communities, and impacts to related private lands in Lassen County.

GOAL A-6: To protect and maximize the present and future productive, economic, and environmental values of the County's soil resources.

- Policy AG-20: The County recognizes the need to protect and conserve areas where soils have high resource values especially in terms of potential agricultural productivity.
- Policy AG-21: The County discourages the development of land having soils of significant agricultural value for purposes other than agriculture or land uses directly related to agriculture.

GOAL A-7: Protection of agricultural lands and lands having substantial potential for productive agricultural use from the intrusion of incompatible neighboring uses and factors which threaten to constrain or reduce agricultural productivity.

- Policy AG-22: The County shall continue to support “right to farm” provisions and shall discourage and minimize the introduction and encroachment of uses which may conflict with agricultural operations or future agricultural development.
- Policy AG-23: The County encourages strategy plans and strong measures to manage feral horses and burros on public and private rangelands and to minimize related damage to livestock and wildlife forage and water resources.
- Policy AG-24: The County supports strong measures to eliminate or prevent the spread of invasive weeds and plant species including, but not limited to, medusahead, yellow starthistle, and perennial pepperweed (whitetop), and to control the adverse effects from the excessive spreading of such species as juniper and cheatgrass.

GOAL A-8: Administrative relief in limited circumstances when the creation of a parcel is needed for a homesite or other special need related to an agricultural operation when the resulting parcel would be smaller than otherwise required in the agricultural area.

- Policy AG-25: The County may establish and administer processes to allow, under limited circumstances and with appropriate findings, the division of land in agricultural zones in order to create special parcels which would be smaller than the size of parcels generally required in the agricultural areas. Approval of such processes (e.g., “Segregation of Homesites”, ancillary to an approved use permit, or other processes) shall not be

construed to be a “variance” of the County Code and may be exempted from the required findings of an “agricultural conversion”. When supported by appropriate findings, such land divisions shall not be regarded as inconsistent with the intent of the agricultural land use designation.

GOAL A-9: Maintain a good regional reputation for locally-produced agricultural products.

- Policy AG-26: The County supports measures to promote and protect the quality and image of agricultural products produced in Lassen County.

GOAL A-10: Maintain a sensible appropriation and utilization of water for agricultural use in the county.

- Policy AG-27: In order to insure adequate supplies of irrigation water to areas having the highest potential for agricultural productivity, the County supports analysis and, when warranted, development of water impoundments and aqueducts to transport water resources to areas within the County which have the foremost agricultural soils.
- Policy NR-8: The County recognizes the need to protect and conserve areas where soils have high resource values, especially in terms of potential agricultural productivity.
- Policy NR-9: The County discourages the development of land having soils of significant agricultural value for purposes other than agriculture or land uses directly related to agriculture.

GOAL N-11: Healthy forest environments which will continue to provide resources for multiple uses and timber production in sustainable quantities which will benefit the local economy.

- Policy NR-31: It is recognized by the County that the timber industry has historically been and continues to be a major economic and social component of Lassen County and therefore represents a vital factor in the fundamental culture and customs of the community.
- Policy NR-33: The County supports the balancing of policies for the conservation of natural resources (including wildlife management policies) in forested areas with the need to maintain production of timber at abundant, sustainable levels as an economic resource.
- Policy NR-34: The County recognizes the critical role that timber resources on Federal lands have in the economy of Lassen County and shall continue to advocate and support Federal resource management policies and practices which make plentiful, sustainable quantities of timber available for local lumber and timber-related industries.
- Policy NR-35: The County supports the efforts of the timber industry and local citizens to forge cooperative plans and agreements to achieve diverse objectives for protecting and managing forest resources while providing for the long-term economic stability of timber-reliant industries.

- Policy NR-36: In areas having significant forest and timber resources, the County supports the formulation of resource management goals and objectives which address the long-term health and diversity of resources in these areas as well as the sustained productivity of timber products.
- Policy NR-37: The County supports management of endangered species and critical wildlife habitats in balance with other resource management needs, including the need for economic stability related to timber industries.
- Policy NR-38: The County supports successful reforestation of harvested and fire-damaged areas on private and publicly-owned timberlands.

GOAL L-16: Conservation of productive agricultural lands and lands having substantial physical potential for productive agricultural use, and the protection of such lands from unwarranted intrusion of incompatible land uses and conversion to uses which may significantly obstruct or constrain agricultural use and value.

- Policy LU-35: Subject to case-by-case review (including review for compatibility with surrounding agricultural uses), and in compliance with relevant area plan, zoning, permitting and environmental review requirements, the development and operation of the following land uses will typically be deemed to be consistent with the Extensive and Intensive Agriculture land use designations and will not require zoning to an "Industrial" zoning district, nor will they be interpreted by the County to constitute an "agricultural conversion" pursuant to this General Plan:
 - a) processing plants for the production of agricultural products;
 - b) processing plants for the production of natural resource products where the location of the resource is fundamental to the location of processing and packaging facilities (e.g., water bottled at the source, etc.);
 - c) mines, the extraction of minerals, and the ancillary processing of mineral materials generated onsite, including the production of asphalt, ready-mix concrete and similar products;
 - d) sawmills and related timber processing operations;
 - e) geothermal and natural gas wells, hydroelectric projects, and ancillary facilities for the production of energy; and
 - f) uses of similar character as may be determined by the Board of Supervisors.
- Policy LU-40: The County recognizes and has generally assigned General Plan land use designations for lands having high agricultural resource value as "Intensive Agriculture" or "Crop Land and Prime Grazing Land". It also recognizes the potentially important agricultural values of some of the areas designated "Extensive Agriculture" or "Grazing and Sagebrush Environment" for rangeland grazing and other agricultural purposes.

Standish-Litchfield Area Plan

The Project site is located within the boundaries of the *Standish-Litchfield Area Plan*, originally adopted in 1986. The Area Plan contains the following goals, objectives, and policies related to agricultural resources:

GOAL: Protect productive agricultural lands from conversion to less appropriate uses or conflict caused by intrusion from incompatible uses. Protect resource values of the area's rangeland and livestock production areas.

- Policy 7-A: Agricultural land in Lassen County shall be protected for its economic importance, its contribution to the character of the community and its environmental values. Agricultural lands in the Planning Area shall be designated as either intensive or extensive agriculture.
- Policy 7-B: Parcel sizes shall be retained at sufficient sizes for productive economic agricultural use.

4.3.3 Previous CEQA Reviews

The Environmental Impact Reports (EIRs) prepared for operations at the Project site in 1981 and 1997 did not include an analysis of impacts to agriculture and forestry resources. Agriculture and forestry resources were not evaluated in the 2019 EIR. The Initial Study prepared by the County for the project in 2018 determined there would be no impact to agriculture and forestry resources since the project did not change the location or type of mining.

4.3.4 Thresholds of Significance

In accordance with CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the project. The following significance thresholds related to *Agriculture and Forestry Resources* have been derived from Appendix G of the CEQA Guidelines:

- *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.*
- *Conflict with existing zoning for agricultural use or a Williamson Act contract.*
- *Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use.*
- *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)) or result in the loss of forest land or conversion of forest land to non-forest use.*

4.3.5 Impact Analysis

The following includes an analysis of environmental parameters related to *Agriculture and Forestry Resources* based on Appendix G of the CEQA Guidelines. The discussion not only includes the areas for which there is potential for environmental impacts but also provides justification for the

conclusions that either no impacts, less than significant impacts, or less than significant impacts with mitigation could occur. The CEQA Checklist question, discussion, and environmental significance conclusions are provided below under each individual environmental parameter related to *Agriculture and Forestry Resources*.

Areas of No Project Impact

As required by CEQA Guidelines §15082, the County issued a Notice of Preparation (NOP) on April 28, 2021 that summarized the proposed Project, stated its intention to prepare an EIR, and requested comments regarding the scope and content of the EIR from responsible and trustee agencies. In the course of the County's initial evaluation, certain impacts of the proposed Project were found to not be significant because of the inability of a project of this scope to create such impacts or the absence of project characteristics producing effects of this type. The effects determined not to be significant are not required to be included in primary analysis sections of the DSEIR. As such, the following impacts either are not applicable to the proposed Project or are not reasonably foreseeable and are not addressed further within this section:

- *Conflict with existing zoning for agricultural use or a Williamson Act contract.*

The proposed Project is not covered by a Williamson site contract. The County's General Plan allows for mining in areas designated as Extensive Agriculture. Implementation of the proposed Project would result in no impact or conflict with existing uses or a Williamson Act contract.

- *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)) or result in the loss of forest land or conversion of forest land to non-forest use.*

The Project area is not forested and not zoned for forestland, timberland, or timber production zone. There is no conflict or impact to forestland.

Project Impacts

Impact 4.3-1: 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 (FMMP) of the California Resources Agency, to non-agricultural use.

According to the NRCS, Lassen County has not been surveyed for inclusion in the FMMP. Pursuant to CEQA §21060.1, in those areas of the state where lands have not been surveyed "agricultural land" means land that meets the requirements of "prime agricultural land" as defined in California Government Code Section 51201(a)(1), (2), (3), and (4) as follows:

- All land that qualifies for rating as class 1 or class 2 in the NRCS land use capability classifications.
- Land which qualifies for rating 80 through 100 in the Storie Index Rating.

- Land which supports livestock used for the production of food and fiber and which has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the USDA.
- Land planted with fruit- or nut-bearing trees, vines, bushes, or crops which have a nonbearing period of less than five years and which will normally return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than two hundred dollars (\$200) per acre.

The Land Capability Classification Rating

The Land Capability Classification (LCC) indicates the suitability of soils for most kinds of crops. Groupings are made according to the limitations of the soils when used to grow crops, and the risk of damage to soils when they are used in agriculture. Soils are rated from Class 1 to Class 8, with soils having the fewest limitations receiving the highest rating (Class I). Specific subclasses are also utilized to further characterize soils. A description of each soil rating is provided in Table 4-2. The LCC also includes capability subclasses, which are soil groups within one capability class and are designated by the letters “e”, “w”, “s”, or “c” as described in Table 4-3.

Table 4-2 LAND CAPABILITY CLASSIFICATION CLASSES	
Class	Description
1	Soils have few limitations that restrict their use.
2	Soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.
3	Soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.
4	Soils have very severe limitations that reduce the choice of plants or that require very careful management, or both.
5	Soils are subject to little or no erosion but have other limitations that are impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.
6	Soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.
7	Soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.
8	Soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or aesthetic purposes.
Source: Natural Resources Conservation Service. 2017.	

Table 4-3 LAND CAPABILITY CLASSIFICATION SUBCLASSES	
Subclass	Description
e	The main problem or hazard is the risk of erosion. The susceptibility of erosion and past erosion damage are the main soil factors that affect soils in this subclass.
w	Water in or on the soil interferes with plant growth or cultivation. Poor soil drainage, wetness, a high-water table, and overflow are the factors that affect soils in this subclass.
s	The soil has limitations within the rooting zone, mainly because it is shallow, has low moisture-holding capacity, or is stony.
c	The chief limitation is climate that is very cold or very dry.
Source: Natural Resources Conservation Service. 2017.	

Storie Index Rating

The Storie Index provides a numeric rating (based upon a 100-point scale) of the relative degree of suitability or value of a given soil for intensive agriculture. The rating is based upon the character of the soil profile, surface texture, steepness of the slope, drainage, alkalinity, fertility, wind and water erosion, acidity, and microrelief.

Animal-Unit Rating

An animal unit (AU) is generally one mature cow of approximately 1,000 pounds and a calf as old as six months, or their equivalent. The NRCS uses 30 pounds per day (10,950 pounds per year) air-dry weight (as-fed) of forage as the standard forage demand for a 1,000-pound cow with a calf. The range production ratings shown in Table 4-4 identify the amount of vegetation that can be expected to grow annually in a well-managed area that is supporting the potential natural plant community. It includes all vegetation, whether or not it is palatable to grazing animals.

Project Site Soils

Soils on the Project site are shown on Figure 3-7 and summarized in Table 4-4.

Table 4-4 PROJECT SOIL TYPES						
Map Unit Symbol	Soil Name	Total Acres	% of Project Site	Land Capability Classification (LCC)	Storie Index	Range Production (pounds per acre per year)
302	Orhood, very stony sandy loam, 5-15% slope	11.2	14.3	7s	11-20	1,290
283	McConnel-Mottsville complex, 2-9% slope	40.3	51.2	6e	11-20	870
179	Devada Rock Outcrop association, 2-50% slope	27.2	34.6	7e	11-20	580
Sources: Natural Resources Conservation Service. 2017; USDA, Soil Conservation Service and Forest Service.						

No portion of the proposed Project site is irrigated; therefore, the LCCs presented in Table 4-4 reflect the classification for non-irrigated soils. As indicated in Table 4-4, the project site does not include any LCC Class 1 or 2 soils or soils rated 80-100 in the Storie Index Rating. Although the Project site could be used as grazing land, based on range production as shown in Table 4-4, the Project site would not yield sufficient vegetation to support an annual carrying capacity equivalent to at least one animal unit per acre. In addition, there are no fruit or nut-bearing trees on the project site. Therefore, the Project site does not meet the definition of prime agricultural land included in California Government Code §51201; impacts would be less than significant.

Impact 4.3-2: Involve other changes in the existing environment that, due to their location or nature, could result in conversion of farmland to nonagricultural use.

The proposed Project will not result in the loss of prime farmland, unique farmland, or farmland of statewide importance, nor will the proposed Project result in the conversion of farmland to non-agricultural use. However, the proposed Project will result in the loss of approximately 78.6 acres of low capability grazing land. Refer to discussion under Impact 4.3-1, above. Impacts would be less than significant in this regard.

4.3.6 Mitigation Measures

No mitigation measures are required.

4.3.7 Level of Significance after Mitigation

No mitigation measures are required. Impacts would be less than significant.

4.4 Air Quality

This section includes a discussion of the potential air quality impacts of the proposed Project. Increasing production volume of the mine from 100,000 to 200,000 tons per year, expansion of the mine to include an additional 78.6 acres of mining area, and extension of mining for 20 years are substantial changes proposed that will require revisions of the previous EIR due to the involvement of potentially new significant environmental effects pertaining to air quality or a substantial increase in the severity of previously identified significant effects under CEQA Guidelines §15162.

This section includes a description of the air quality setting of the Project site and summarizes air quality regulations and the previous CEQA review of air quality impacts at the Project site. This section contains an analysis of the air quality impacts of the proposed Project including a discussion of human health impacts related to diesel particulate matter. The analysis is based on information contained in the *Ward Lake Pit Expansion Air Quality and Health Risk Assessment Technical Report* prepared for the Project by RCH Group in September 2021 (refer to Appendix D, *Air Quality & Health Risk Assessment*).

4.4.1 Environmental Setting

The following environmental setting information was obtained from the *Ward Lake Pit Expansion Air Quality and Health Risk Assessment Technical Report* (RCH Group, 2021). The Project site is located in the Northeast Plateau Air Basin (Air Basin), which comprises Siskiyou, Modoc, and Lassen counties. The Air Basin has a climate regime that is distinct from the rest of California. The Air Basin has sharply defined seasons that follow a continental, rather than marine, pattern. Winters are cold and snowy; summers are warm and dry. The Air Basin includes part of the Klamath Mountains to the west and the Cascade Range and Modoc Plateau, plus a slice of the Great Basin along its eastern edge. The volcanic Modoc Plateau extends across the northeastern expanse, with an elevation mostly above 4,500 feet above mean sea level (msl).

The region receives little to no transported air pollution from major urban areas. As in many rural areas in California, particulates from dust and wood smoke are sometimes a problem. Only the city of Yreka experiences occasional ozone concentrations that approach “near exceedances.”

Land uses such as residences, schools, children’s daycare centers, hospitals, and convalescent homes are considered to be more sensitive than the general public to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. California Air Resources Board (CARB) has identified the following people as most likely to be affected by air pollution: children less than 14 years of age, the elderly over 65 years of age, athletes, and those with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive population groups.

Residential areas are considered more sensitive to air quality conditions than commercial and industrial areas because people generally spend longer periods of time at their residences, resulting in greater exposure to ambient air quality conditions. Recreational uses are also considered sensitive, due to the greater exposure to ambient air quality conditions and because the presence of pollution detracts from the recreational experience.

The Project site is surrounded by open grazing lands. Immediately adjacent to and south of the site, a smaller aggregate mine is located on Bureau of Land Management (BLM) administered land. Other BLM land is located to the east and south and the Wells Ranch is located directly to the north. Six homes are located on parcels from 10 to 80 acres in size to the west and south along Ward Lake Road. The nearest residence is approximately 875 feet from the western property line of the of the existing quarry (where processing occurs) and approximately 4,500 feet from the proposed quarry expansion area. Shaffer Elementary School is located 2.4 miles to the southeast of the site.

The Lassen County Air Pollution Control District (APCD) is the local air district governing Lassen County which is part of the Northeast Plateau Air Basin. The Lassen County APCD requires permits for proposed construction, alteration or replacement of equipment or facilities which may cause the issuance of air contaminants. Ward Lake Quarry maintains a permit to operate (PTO-19-140: expiration date March 31, 2024) for onsite equipment such as a hot mix asphalt plant, a lime slurry mix plant, a concrete plant, a crushing plant, a wash plant, a sand plant, and several diesel generators (one 750 horsepower [hp] generator associated with the crushing plant, one 475 hp generator associated with the portable plant, and one 469 hp generator associated with the wash plant). The existing facility also has a daily and annual limit on the number of haul truck trips.

4.4.2 Regulatory Setting

The following is a description of federal, State, and local environmental laws and policies that are relevant to the CEQA review process for the proposed expansion area.

Federal

Federal Clean Air Act

The federal Clean Air Act (CAA) was first signed into law in 1970. In 1977, and again in 1990, the law was substantially amended. The federal CAA is the foundation for a national air pollution control effort, and it is composed of the following basic elements: National Ambient Air Quality Standards (NAAQS) for criteria air pollutants, hazardous air pollutant standards, state attainment plans, motor control measures, stratospheric ozone protection, and enforcement provisions. The USEPA is responsible for administering the federal CAA. The federal CAA requires the USEPA to set NAAQS for several problem air pollutants based on human health and welfare criteria. Two types of NAAQS were established: primary standards, which protect public health, and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction.

State

California Clean Air Act

The California CAA was first signed into law in 1988. The California CAA provides a comprehensive framework for air quality planning and regulation, and spells out, in statute, the state's air quality goals, planning and regulatory strategies, and performance. CARB is the agency responsible for administering the California CAA. CARB established California Ambient Air Quality Standards (CAAQS) pursuant to the California Health and Safety Code (CH&SC) [§39606(b)], which are similar to the federal standards.

Ambient Air Quality Standards

Regulation of air pollutants is achieved through both NAAQS and CAAQS and emissions limits for individual sources. Regulations implementing the federal CAA and its subsequent amendments established NAAQS (national standards) for the six criteria pollutants. California has adopted more stringent CAAQS (state standards) for most of the criteria air pollutants. In addition, California has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Because of the meteorological conditions in the state, there is considerable difference between state and federal standards in California.

The ambient air quality standards are intended to protect the public health and welfare, and they incorporate an adequate margin of safety. They are designed to protect those segments of the public most susceptible to respiratory distress, known as sensitive receptors, including asthmatics, the very young, elderly, people weakened from other illness or disease, or persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollution levels somewhat above the ambient air quality standards before adverse health effects are observed.

Under amendments to the federal CAA, USEPA has classified air basins or portions thereof, as either “attainment” or “non-attainment” for each criteria pollutant, based on whether or not the national standards have been achieved. The California CAA, which is patterned after the federal CAA, also requires areas to be designated as “attainment” or “non-attainment” for the state standards. Thus, areas in California have two sets of attainment/nonattainment designations: one set with respect to the federal standards and one set with respect to the state standards. Table 4-5 shows the federal and State ambient air quality standards for different criteria pollutants and also summarizes the related health effects and principal sources for each pollutant.

Toxic Air Contaminants

Toxic Air Contaminants (TAC) are pollutants that may be expected to result in an increase in mortality or serious illness or that may pose a present or potential hazard to human health. Health effects include cancer, birth defects, neurological damage, damage to the body’s natural defense system, and diseases that lead to death. Although ambient air quality standards exist for criteria pollutants, no such standards exist for TAC. Many pollutants are identified as TAC because of their potential to increase the risk of developing cancer or because of their acute or chronic health risks. For TAC that are known or suspected carcinogens, the CARB has consistently found that there are no levels or thresholds below which exposure is free of risk. Individual TAC varies greatly in the risk they present. At a given level of exposure, one TAC may pose a hazard that is many times greater than another. For certain TAC, a unit risk factor can be developed to evaluate cancer risk. For acute and chronic health risks, a similar factor called a Hazard Index is used to evaluate risk. In the early 1980s, CARB established a statewide comprehensive air toxics program to reduce exposure to air toxics. The Toxic Air Contaminant Identification and Control Act (Assembly Bill [AB] 1807) created California’s program to reduce exposure to air toxics. The Air Toxics “Hot Spots” Information and Assessment Act (AB 2588) supplements the AB 1807 program by requiring a statewide air toxics inventory and notification of people exposed to a significant health risk and sensitive receptors.

Local

According to the Lassen County APCD, the Air Quality Index in Lassen County is classified as “good” for the majority of the year, although events such as wildfires and inversion layers in winter months can periodically degrade air quality. There are no ambient air quality monitoring stations or other facilities conducting ambient air quality monitoring of toxic contaminants in Lassen County; therefore, local ambient concentrations are not available. The only ambient air quality monitoring station located in the Northeast Plateau Air Basin is the Yreka-Foothill Drive Monitoring Station, located approximately 170 miles northwest in Yreka within Siskiyou County. Consideration of data from “regional sites” impacted by similar natural and man-made sources is an accepted practice by the USEPA; therefore, a summary of ambient air quality monitoring data collected by the Yreka-Foothill Drive Monitoring Station for ozone and PM_{2.5} (PM₁₀ monitoring was discontinued in 2016) is provided in Table 4-6. Although the region experiences elevated concentrations, Lassen County is in attainment/unclassified for federal and state PM₁₀ and PM_{2.5} standards as well as ozone.

Table 4-5 AMBIENT AIR QUALITY STANDARDS AND MAJOR POLLUTANT SOURCES				
Pollutant	Averaging Time	State Standard	Federal Standard	Major Pollutant Sources
Ozone	8 hour	0.070 ppm	0.070 ppm	Formed when ROG and NOx react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial/ industrial mobile equipment.
	1 hour	0.09 ppm	--	
Carbon Monoxide	8 hour	9.0 ppm	9 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	1 Hour	20 ppm	35 ppm	
Nitrogen Dioxide	Annual Average	0.030 ppm	0.053 ppm	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.
	1 Hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide	Annual Average	--	0.030 ppm	Fuel combustion, chemical plants, sulfur recovery plants and metal processing.
	24 Hour	0.04 ppm	0.14 ppm	
	1 Hour	0.25 ppm	0.075 ppm	
Particulate Matter (PM ₁₀)	Annual Arithmetic Mean	20 ug/m ³	--	Dust-and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays)
	24 hour	50 ug/m ³	150 ug/m ³	
Particulate Matter (PM _{2.5})	Annual Arithmetic Mean	12 ug/m ³	12 ug/m ³	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; also, formed from photochemical reactions of other pollutants, including Nox, sulfur oxides, and organics.
	24 hour	--	35 ug/m ³	
Lead	Calendar Quarter	--	1.5 ug/ m ³	Present source: lead smelters, battery manufacturing and recycling facilities. Past source: combustion of leaded gasoline.
	30 Day Average	1.5 ug/m3	--	
Note: ppm = parts per million; and □ g/m3 = micrograms per cubic meter. Source: California Air Resources Board, <i>Air Quality Standards</i> , Accessed January 26, 2021, https://ww2.arb.ca.gov/resources/98california-ambient-air-quality-standards .				

Table 4-6 AIR QUALITY DATA SUMMARY (2017 -2019)				
Pollutant	Standard ^a	2017	2018	2019
Ozone				
Highest 1 Hour Average (ppm) ^b	0.090	0.053	0.089	0.069
Days over State Standard		0	0	0
Highest 8 Hour Average (ppm) ^b	0.070	0.049	0.075	0.059
Days over National Standard		0	4	0
Highest 8 Hour Average (ppm) ^b	0.070	0.049	0.075	0.059
Days over State Standard		0	4	0
Particulate Matter (PM_{2.5})				
Highest 24 Hour Average (ug/m ³) ^b	35	79	143	74
Days over National Standard		26	57	4
State Annual Average (ug/m ³) ^b	12	11.1	14.4	5.9
Notes: Values in bold are in excess of at least one applicable standard.				
a. Generally, State standards and National standards are not to be exceeded more than once per year.				
b. ppm=parts per million; ug/m ³ =micrograms per cubic meter.				
c. PM ₁₀ is not measured every day of the year. Number of estimated days over the standard is passed on 365 days per year.				
Source: California Air Resources Board, <i>Air Quality Trend Summaries</i> , https://www.arb.ca.gov/adam/trends/trends1.php				

According to the *Lassen County 2012 Regional Transportation Plan*, elevated PM₁₀ concentrations can be caused by sources including fugitive dust, combustion from automobiles and heating, road salt, and conifers, among others. Constituents that comprise suspended particulates include organic, sulfate, and nitrate aerosols that are formed in the air from emitted hydrocarbons, chloride, sulfur oxides, and oxides of nitrogen. Particulates reduce visibility and pose a health hazard by causing respiratory and related problems. CARB further identifies motor vehicles, wood-burning stoves and fireplaces, dust from construction, landfills, and agriculture, wildfires and brush/waste burning, industrial sources, and windblown dust from open lands as major sources of PM₁₀.

Lassen County General Plan

The Natural Resources Element of the *Lassen County General Plan* includes the following applicable goal, policies, and implementation measures related to air quality:

GOAL N-22: Air quality of high standards to safeguard public health, visual quality, and the reputation of Lassen County as an area of exceptional air quality.

- Policy NR-74: The Board of Supervisors will continue to consider, adopt, and enforce feasible air quality standards which protect the quality of the County's air resources.
- Policy NR-75: The County shall consider the appropriateness and feasibility of air pollution control requirements for individual projects and may grant variances to specific requirements pursuant to established procedural guidelines.

Lassen County APCD Rule 4:18 (Fugitive Dust Emissions)

Compliance with regulatory requirements related to fugitive dust are applicable to reduce impacts to less than significant. Based on Lassen County APCD Rule 4:18 (Fugitive Dust Emissions), reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including, but not limited to, the following provisions:

- a. Covering open bodied trucks when used for transportation materials likely to give rise to airborne dust.
- b. Installation and use of hoods, fans, and other fabric filters to enclose and vent the handling of dusty materials. Containment methods may be employed during sandblasting and other similar operations.
- c. The application of asphalt, oil, water or suitable chemicals to dirt roads, material stockpiles, land clearing, excavation, grading or other surfaces which can give rise to airborne dusts.
- d. The prompt removal of earth or other material from paved streets onto which earth or other material for earth moving equipment, erosion by water, or other means has been deposited.

4.4.3 Previous CEQA Reviews

1981 EIR

The 1981 *Environmental Impact Report for Operation of Aggregate Materials Source Operation of Rock Crushing Plant Operation of Asphalt Concrete Batch Plant (SCH No. 80062304)*, prepared for the original operation at the site, analyzed limited air impacts of the initial mining operation – specifically, the generation of dust from asphalt operation and crushing. The EIR noted concerns that the Project would impact air quality via the generation of dust from mining and crushing and transport of site materials. In addition, odor, and emission for asphalt the fuel storage tanks were addressed. The 1981 EIR included the following mitigation measures related to air quality:

- *Treating stockpile surfaces with water.*
- *Providing wind breaks of dirt berms and placement of fine aggregates between coarse aggregate piles to screen from periling winds.*
- *Planning of plant layout to take advantage of natural topography.*
- *Careful operation and loading and hauling of equipment to prevent generation of dust.*
- *Use of conveyor covers or enclosure of the dry feed elevator.*
- *Installation of secondary control structures (baghouse dry dust and weather systems.*
- *Minimizing the distance of fall between pugmill and storage hoppers to reduce odors.*
- *Use of low-sulfur fuels.*
- *Asphalt and fuel storage tanks being closed at all times and maintained in a clean condition with care taken to avoid spills.*
- *Application for permit to operate from the APCD office.*
- *Pave the access and haul roads as well as the plant site as soon as feasible to eliminate the primary complaint of dust which results when equipment and trucks operate on unpaved areas. Actual timing of paving these areas would be governed by the volume of production and hauling warranting this improvement and subject to review and recommendations of the Planning Commission.*
- *Use of water trucks on any unpaved portions of the area is anticipated; and vehicle speed within the site controlled at 10 MPH to avoid creation of unnecessary dust.*
- *Water or dust oils would be applied to County Road 308 (Ward Lake Road) by the applicant as required to alleviate dust from truck traffic and would continue until such time as paving is required.*
- *Speed on County Road 308 from the plant access point to A-27 (Center Road) would necessarily be limited to approximately 25 MPH due to the road conditions and the short length (approximately one mile) encompassed.*

1997 EIR

The 1997 *Ward Lake Expansion EIR* prepared for the previous spatial expansion and operational addition of the ready-mix concrete plant determined that air impacts of the expansion were less than significant with mitigation incorporated. Similar issues and concerns were noted on the 1997 EIR as in the 1981 EIR. The 1997 EIR noted the APCD measures included therein, which were included as conditions to the new APCD permit in 1996 and included AB 2588 *Air Toxics Assessment*, were sufficient to reduce impacts to below significant levels. The 1997 EIR included the following mitigation measures to reduce dust and other airborne pollutants:

Compliance with APCD Permit to Operate Conditions.

- *Miller's Custom Work shall apply water to all roads on the plant site which are being used during plant operation. All roads being used shall be wet at all times without exception. Additionally, stockpiles of sand, gravel, etc., should also be watered when feasible.*
- *Miller's Custom Work shall install or replace any and all metal flashing around hoppers, conveyors, or fans in order that fugitive dust resulting from operation of the plant is reduced to a level which is in compliance with District Rule 4:18. Installation or replacement of such metal flashing shall occur prior to start of the plant in 1991 (and the concrete plant in 1996). Additionally, Miller's Custom Work shall notify the Lassen County Air Pollution Control District at the start or the first days of operation in 1991 (and the concrete plant in 1996), so that an inspection can be made of the plant sites to determine compliance with this conditions.*
- *Miller's Custom Work shall contract with a California Air Resources Board certified private contractor for an annual compliance test at the Ward Lake facility to determine compliance with Lassen County Air Pollution Control District Rule 4:3 (Grain Loading Rule -0.3 grain per cubic foot gas). This test shall be performed prior to January 1 of every year.*

Additional conditions for the concrete plant:

- *Not more than 7,000 cubic yards of concrete shall be processed annually.*
- *Aggregate charged and/or processed shall be kept sufficiently moist to prevent visible dust emissions.*
- *Dust collected by the baghouse filter shall be discharged into closed containers only.*
- *Cloth bags in the baghouse shall be cleaned and/or replaced periodically.*
- *Annual operation shall be limited to dates as recommended by the wildlife biologist in the EIR and/or as adopted by the lead agency.*

2019 EIR

The County determined 24-hour operations and increased traffic analyzed in the 2019 EIR did not include any changes that would result in impacts to air quality with the exceptions of a potential exposure of sensitive receptors to substantial pollutant concentrations and the potential to create objectionable odors affecting a substantial number of people. These impacts were determined to be less than significant. However, an analysis of the health impacts from diesel particulate matter emissions from diesel generators and haul trucks was included due to concerns raised in early consultation about the health impacts of diesel particulate matter. For this reason, a *Health Risk*

Assessment was prepared. The *Health Risk Assessment* assessed the health impacts to nearby receptors from diesel particulate matter generated by additional truck trips and operation of generators onsite. Cancer risks and non-cancer health risks were calculated to be below thresholds for significant health impact. Impacts to air quality were determined to be less than significant. Cumulative impacts to air quality were determined to be less than significant.

4.4.4 Thresholds of Significance

In accordance with CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the project. The following significance thresholds related to *Air Quality* have been derived from Appendix G of the CEQA Guidelines:

- *Conflict with or obstruct implementation of the applicable air quality plan.*
- *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard.*
- *Expose sensitive receptors to substantial pollutant concentrations.*
- *Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.*

The thresholds of significance applied to assess project-level health impacts are:

- *Exposure of persons by siting a new source or a new sensitive receptor to substantial levels of TAC resulting in:*
 - *(a) a cancer risk level greater than 10 in one million.*
 - *(b) a noncancerous risk (chronic or acute) hazard index greater than 1.0. For this threshold, sensitive receptors include residential uses, schools, parks, daycare centers, nursing homes, and medical centers.*

Lassen County Rules and Regulations include general provisions and rules for APCD-issued permits, fees, prohibitions (including but not limited to nuisance, particulate matter, specific air contaminants, open burning, gasoline storage, reduction of odorous matter, fugitive dust emissions, and equipment breakdown), procedures, new source siting, and Title V permits. Operation of the Project would be implemented in compliance with the Lassen County APCD Air Quality Rules and Regulations.

Lassen County APCD has a nuisance rule which implicitly regulates pollutants other than those for which criteria standards have been adopted. Rule 4:2 states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business and property. Rule 4:2 may be

interpreted to restrict ambient concentrations of pollutants, such as toxic and hazardous pollutants, until other standards are in place.

Lassen County APCD Rule 4:18 states that reasonable precautions shall be taken to prevent particulate matter from becoming airborne and allows for the application of asphalt, oil, water, or suitable chemicals to dirt roads, material stockpiles, land clearing, excavation, grading or other surfaces which can give rise to airborne dusts.

Additionally, the Lassen County APCD Rule 6:4 includes the following Best Available Control Technology (BACT) Emission thresholds: An applicant shall apply BACT to a new source or modification of an existing source, except cargo carriers, for each affected pollutant emitted, including halogenated hydrocarbons, under the following conditions:

- 1) A new stationary source emits more than 150 pound per day of ROG, NO_x, PM₁₀, or PM_{2.5}; or 550 pounds per day of CO (equivalent to 27 tons per year and 100 tons per year respectively).
- 2) A modification of an existing stationary source will result in a net emission increase of an affected pollutant by an amount more than any of the limits above.
- 3) A new source or modification subject to BACT for any pollutant subject to this section shall apply BACT for any other affected pollutant emitted from the new source or modification if the Air Pollution Control Officer should so require.

4.4.5 Impact Analysis

The existing surface mining operation (100,000 tons per year annual limit) is presently permitted for the mining of rock, crushing, screening, washing, material stockpiling, fuel storage; operation of a cement plant (12,000 cubic-yard annual limit) and asphalt plant (400,000 tons per year); and the use of settling ponds, scales, an office, and a truck shop. Grading, excavating, and blasting are prohibited onsite between January 1st and March 31st annually, except in a state of emergency. Currently permitted operations at the project site allow the applicant to provide materials for emergency projects and construction projects that require continuous 24-hour operations. In order to respond to emergency projects, the annual removal volume of the mine presently could exceed 100,000 tons. The majority of operations occur from April through October. In addition, the current operation includes mining from 2020 through 2030 to allow increased extraction of materials from the site.

The Lassen County APCD is the local air district governing Lassen County which is part of the Northeast Plateau Air Basin. The Lassen County APCD requires permits for proposed construction, alteration or replacement of equipment or facilities which may cause the issuance of air contaminants. The existing quarry maintains a permit to operate (PTO-19-140: expiration date March 31, 2024) for existing onsite equipment such as a hot mix asphalt plant, a lime slurry mix plant, a concrete plant, a crushing plant, a sand wash plant, and several diesel generators. As of the permit issuance, the facility had five diesel generators with the following upgrades or replacements planned:

- One 750 horsepower (hp) diesel generator associated with the asphalt plant, which has been switched to line power.
- One 750 hp diesel generator associated with the aggregate plant, which will be switched to line power by January of 2022.
- One 755 hp diesel generator associated with the aggregate plant, which will be updated with Air District approved Tier 4 engine⁸ or switched to line power by January of 2023.
- One 475 hp diesel generator associated with the lime plant, which will be updated with Air District approved Tier 4 engine or switched to line power by January of 2024.
- One 470 hp diesel generator associated with the wash plant, which will be updated with Air District approved Tier 4 engine or switched to line power by January of 2025.

The proposed Project includes increasing the crushing operations (from 100,000 to 200,000 tons per year) and expansion of the mine to include an additional 78.6 acres of mining area. The typical and maximum daily operations are not expected to change as a result of the proposed Project. However, the annual number of crushing operation hours may be greater as a result of the proposed Project in order to process the greater annual amount of aggregate. This change in hours of operation may also include the 755 hp diesel generator associated with the aggregate plant (which by January of 2023 will be an APCD approved Tier 4 engine or switched to line power). Therefore, the air quality analysis (to be conservative) included greater hours of operation for the diesel generator associated with the aggregate plant and assumed the diesel generator would not be replaced by line power. The end date of mining would be extended to 2050; an additional 20 years.

The equipment for material processing (i.e., loaders, excavators) would also increase in annual operations to match the increase in crushing operations. The annual operating hours of the majority of off-road equipment will increase by 50 percent. The proposed Project would not change the hot mix asphalt plant, the lime slurry mix plant, the concrete plant, portable plant, and diesel generator operations associated with hot mix asphalt plant and portable plant nor would the proposed project change the daily or annual haul truck trip limit. The potential air quality impacts associated with the proposed 78.6-acre quarry expansion are discussed below.

Areas of No Project Impact

As required by CEQA Guidelines §15082, the County issued a Notice of Preparation (NOP) on April 28, 2021 that summarized the proposed Project, stated its intention to prepare an EIR, and requested comments regarding the scope and content of the EIR from responsible and trustee agencies. In the course of the County's initial evaluation, certain impacts of the proposed Project were found to not be significant because of the inability of a project of this scope to create such impacts or the absence of project characteristics producing effects of this type. The effects determined not to be significant are not required to be included in primary analysis sections of the DSEIR. As such, the following impacts either are not applicable to the proposed Project or are not reasonably foreseeable and are not addressed further within this section:

- *Conflict with or obstruct implementation of the applicable air quality plan.*

Lassen County is in attainment/unclassified for all criteria pollutants. There are no applicable attainment plans or other local air quality plans for the Northeast Plateau Air

Basin or Lassen County APCD. Therefore, Lassen County is not subject to an air quality plan. No impact would occur in this regard.

Project Impacts

Impact 4.4-1: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard.

The analysis prepared for the proposed quarry expansion focuses on pollutant emissions associated with the aggregate processing operations and supporting activities (i.e., blasting operations and diesel generators associated with crushing and wash plant and off-road equipment such as loaders, excavators, and dozers). The regulatory models used to estimate the air quality impacts are described in detail in the air quality analysis prepared for the proposed Project (refer to Appendix D, *Air Quality & Health Risk Assessment*).

The daily emissions for existing conditions are included in Table 4-7. The daily emissions for the existing conditions plus the proposed Project are included in Table 4-8. Table 4-9 shows the daily incremental emissions of the proposed Project (proposed Project minus existing conditions). The annual emissions for the proposed Project and the annual incremental emissions for the proposed Project (proposed Project minus existing condition) are included in Tables 4-10, 4-11, and 4-12 respectively. The only incremental daily emission change is related to the blasting operations due to greater blasting zone size. The daily processing rates would not change and thus, the associated daily emissions would not change. The incremental annual emissions would be greater due to the proposed Project as a result of the greater annual production rates.

Table 4-7 EXISTING CONDITIONS DAILY EMISSIONS (POUNDS)						
Emission Source	ROG	CO	NO_x	SO₂	PM₁₀	PM_{2.5}
Onsite Equipment	0.94	9.23	6.13	0.03	0.22	0.21
Generator -Crushing Plant	1.34	14.8	200	123	1.75	1.75
Generator -Portable Plant	0.71	13.0	87.5	13.2	1.50	1.50
Generator -Wash Plant	0.70	12.9	86.4	13.0	1.48	1.48
Aggregate Plant	-	-	-	-	16.5	2.48
Wash Plant	-	-	-	-	4.12	0.62
Sand Plant	-	-	-	-	9.38	1.41
Unpaved Travel	-	-	-	-	22.2	3.33
Material Handling	-	-	-	-	2.33	0.35
Blasting	-	-	-	-	4.04	0.61
Haul Trucks	0.73	7.61	91.6	0.39	0.43	0.41
Total	4.43	57.6	471	150	64.0	14.1
Source: RCH Group, 2021.						

Table 4-8 PROPOSED PROJECT DAILY EMISSIONS (POUNDS)						
Emission Source	ROG	CO	NO _x	SO ₂	PM ₁₀	PM _{2.5}
Onsite Equipment	0.94	9.23	6.13	0.03	0.22	0.21
Generator -Crushing Plant	1.34	14.8	200	123	1.75	1.75
Generator -Portable Plant	0.71	13.0	87.5	13.2	1.50	1.50
Generator -Wash Plant	0.70	12.9	86.4	13.0	1.48	1.48
Aggregate Plant	-	-	-	-	16.5	2.48
Wash Plant	-	-	-	-	4.12	0.62
Sand Plant	-	-	-	-	9.38	1.41
Unpaved Travel	-	-	-	-	22.2	3.33
Material Handling	-	-	-	-	2.33	0.35
Blasting	-	-	-	-	7.42	1.11
Haul Trucks	0.73	7.61	91.6	0.39	0.43	0.41
Total	4.43	57.6	471	150	67.3	14.6
Source: RCH Group, 2021.						

Table 4-9 DAILY INCREMENT EMISSIONS (POUNDS)						
Emission Source	ROG	CO	NO _x	SO ₂	PM ₁₀	PM _{2.5}
Existing Condition	4.43	57.6	471	150	64.0	14.1
Proposed Project	4.43	57.6	471	150	67.3	14.6
Project Increment¹	0.52	5.71	77.1	47.6	12.3	2.42
Significance Threshold	150	550	150	-	150	150
Significant (Yes/No)	No	No	No	-	No	No
1. Incremental daily emission change is only related to the blasting operations due to greater blasting zone size.						
Source: RCH Group, 2021.						

Table 4-10 EXISTING CONDITIONS ANNUAL EMISSIONS (TONS)						
Emission Source	ROG	CO	NO _x	SO ₂	PM ₁₀	PM _{2.5}
Onsite Equipment	0.03	0.34	0.23	0.00	0.01	0.01
Generator -Crushing Plant	0.18	2.01	27.2	16.8	0.24	0.24
Generator -Portable Plant	0.10	1.78	11.9	1.80	0.20	0.20
Generator -Wash Plant	0.10	1.76	11.8	1.78	0.20	0.20
Aggregate Plant	-	-	-	-	0.23	0.03
Wash Plant	-	-	-	-	0.07	0.01
Sand Plant	-	-	-	-	0.07	0.01
Unpaved Travel	-	-	-	-	1.33	0.20
Material Handling	-	-	-	-	0.14	0.02
Blasting	-	-	-	-	0.01	0.00
Haul Trucks	0.01	0.11	1.35	0.01	0.01	0.01
Total	0.42	6.00	52.5	20.4	2.51	0.94
Source: RCH Group, 2021.						

Table 4-11 PROPOSED PROJECT ANNUAL EMISSIONS (TONS)						
Emission Source	ROG	CO	NO _x	SO ₂	PM ₁₀	PM _{2.5}
Onsite Equipment	0.06	0.61	0.39	<0.01	0.01	0.01
Generator -Crushing Plant	0.23	2.50	33.9	20.9	0.30	0.30
Generator -Portable Plant	0.10	1.78	11.9	1.80	0.20	0.20
Generator -Wash Plant	0.10	1.76	11.8	1.78	0.20	0.20
Aggregate Plant					0.47	0.07
Wash Plant					0.07	0.01
Sand Plant					0.07	0.01
Unpaved Travel					2.00	0.30
Material Handling					0.21	0.03
Blasting					0.03	0.00
Haul Trucks	0.01	0.11	1.35	0.01	0.01	0.01
Total	0.49	6.76	59.3	24.5	3.55	1.15
Source: RCH Group, 2021.						

Table 4-12 ANNUAL INCREMENT EMISSIONS (POUNDS)						
Emission Source	ROG	CO	NO _x	SO ₂	PM ₁₀	PM _{2.5}
Existing Condition	0.42	6.00	52.5	20.4	2.51	0.94
Proposed Project	0.49	6.76	59.3	24.5	3.55	1.15
Project Increment	0.07	0.77	6.80	4.10	1.04	0.21
Significance Threshold	27	100	27	--	27	27
Significant (Yes/No)	No	No	No	--	No	No
Source: RCH Group 2021.						

Lassen County is currently in attainment or unclassified for all criteria air pollutants. The Lassen County APCD has Best Available Control Technology (BACT) emission thresholds for the criteria pollutants ROG, NO_x, PM₁₀, PM_{2.5}, and CO which apply to the operation of the existing quarry and the proposed quarry expansion. The additional daily emissions of ROG, CO, NO_x, PM₁₀, and PM_{2.5} generated by the Project are less than the significance thresholds of the Lassen County APCD. The annual emissions of ROG, CO, NO_x, PM₁₀, and PM_{2.5} are less than the significant thresholds.

The *Ward Lake Pit Expansion Air Quality and Health Risk Assessment Technical Report* (RCH Group, 2021) includes reasonable precautions to prevent particulate matter from becoming airborne consistent with Lassen County APCD Rule 4:18. These precautions are included as Mitigation Measure 4.4-1. Implementation of these measures will ensure the proposed Project is in compliance with Lassen County APCD rules and regulations and would reduce impacts of the Project to less than significant levels.

The Northeast Plateau Air Basin and Lassen County are currently in attainment or unclassified for all criteria pollutants. Therefore, the proposed quarry expansion will not contribute to a cumulatively considerable air quality impact regarding a pollutant for which the air basin is currently in non-attainment. As noted above, the incremental daily emissions of ROG, CO, NO_x, PM₁₀, and PM_{2.5} are less than the significance thresholds. The incremental annual emissions of ROG, CO, NO_x, PM₁₀, and PM_{2.5} are less than the significance thresholds. The incremental change in emissions is solely related to the Project elements associated with the aggregate plant and supporting activities (generator, unpaved travel, material handling, and blasting). The proposed

Project would not result in a violation of air quality standards. Cumulative air quality impacts will be less than significant.

Impact 4.4-2: Expose sensitive receptors to substantial pollutant concentrations.

A Health Risk Assessment (HRA) was included in the *Ward Lake Pit Expansion Air Quality and Health Risk Assessment Technical Report* (RCH Group, 2021) to address health impacts on existing residences and schools from diesel generators and off-road equipment associated with the aggregate extraction and processing and resultant diesel particulate matter (DPM) emissions from the Project. The proposed Project would constitute an emission source of DPM due to operations associated with generators, off-road equipment, and haul trucks. Studies have demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk.

Health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. Individual cancer risk is the likelihood that a person exposed to air toxic concentrations over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. The maximally exposed individual represents the worst-case risk estimate, based on a theoretical person continuously exposed for a lifetime at the point of highest compound concentration in the air. This is a highly conservative assumption since most people do not remain at home all day and on average residents change residences every 11 to 12 years. In addition, this assumption assumes that residents are experiencing outdoor concentrations for the entire exposure period.

The HRA includes an analysis of the incremental cancer risks to sensitive receptors in the vicinity of the proposed Project, using emission rates (in pounds per hour) from USEPA AP-42, *Compilation of Air Pollutant Emission Factors*, and vendor specifications. DPM emission rates were input into the USEPA's AERMOD atmospheric dispersion model to calculate the ambient air concentrations at receptors in the Project vicinity. The HRA is intended to provide a worst-case estimate of the increased exposure by employing a standard emission estimation program, an accepted pollutant dispersion model, approved toxicity factors, and conservative exposure parameters.

In accordance with OEHHA *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, the HRA was accomplished by applying the highest estimated concentrations of TAC at the receptors analyzed to the established cancer potency factors and acceptable reference concentrations for non-cancer health effects. Increased cancer risks were calculated using the modeled DPM concentrations and OEHHA-recommended methodologies for both a child exposure (third trimester through 2 years of age) and adult exposure. The cancer risk calculations were based on applying the OEHHA-recommended age sensitivity factors and breathing rates, as well as fraction of time at home and an exposure duration of 30 years, to the DPM concentration exposures. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing air pollutants. The supporting methodology and assumptions used in the HRA are provided in Appendix D, *Air Quality & Health Risk Assessment*.

These conservative methodologies overestimate both non-carcinogenic and carcinogenic health risk, possibly by an order of magnitude or more. Therefore, for carcinogenic risks, the actual probabilities of cancer formation in the populations of concern due to exposure to carcinogenic pollutants are likely to be lower than the risks derived using the HRA methodology. The

extrapolation of toxicity data in animals to humans, the estimation of concentration prediction methods within dispersion models; and the variability in lifestyles, fitness and other confounding factors of the human population also contribute to the overestimation of health impacts. Therefore, the results of this HRA are highly overstated.

The following describes the HRA results associated with existing receptors due to existing condition and proposed Project activities. The maximum cancer risk from existing condition emissions for a residential-adult receptor would be 0.17 per million and for a residential-child receptor would be 1.35 per million. The maximum cancer risk from proposed Project emissions for a residential-adult receptor would be 0.52 per million and for a residential-child receptor would be 1.91 per million.

Therefore, the incremental cancer risk for a residential-adult receptor would be 0.35 per million and for a residential-child receptor would be 0.56 per million. Thus, the cancer risk due to Project operations would be below the significance threshold of 10 per million and would be a less than significant health impact. The HRA results reflect the increased DPM emissions as a result of the proposed Project (greater annual usage of off-road equipment to extract additional aggregate materials (i.e., 200,000 vs 100,000 tons) but also the location in which that materials would be extracted (i.e., within the 78.6 acres which are located further from nearby sensitive receptors) and the additional 20 years of activities.

Both acute (short-term) and chronic (long-term) adverse health impacts unrelated to cancer are measured against a hazard index (HI), which is defined as the ratio of the predicted incremental DPM exposure concentration from the proposed Project to a reference exposure level (REL) that could cause adverse health effects. The REL are published by OEHHA based on epidemiological research. The ratio (referred to as the Hazard Quotient [HQ]) of each noncarcinogenic substance that affects a certain organ system is added to produce an overall HI for that organ system. The overall HI is calculated for each organ system. The impact is considered to be significant if the overall HI for the highest-impacted organ system is greater than 1.0.

The chronic reference exposure level for DPM was established by the California OEHHA (OEHHA 2014) as $5 \mu\text{g}/\text{m}^3$. Thus, the proposed Project-related annual concentration of DPM cannot exceed $5.0 \mu\text{g}/\text{m}^3$; resulting in a chronic acute HI of greater than 1.0 (i.e., DPM annual concentration/ $5.0 \mu\text{g}/\text{m}^3$). The chronic HI would be less than 0.01. The chronic HI would be below the significance threshold of 1 and the impact of the proposed Project would therefore be less than significant. Based on the results of the HRA, health impacts of the proposed quarry expansion would be less than significant.

Impact 4.4-3: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Though offensive odors from stationary and mobile sources rarely cause any physical harm, they still remain unpleasant and can lead to public distress, generating citizen complaints to local governments. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors. Eight homes are located on parcels from 10 to 80 acres in size to the west and south along Ward Lake Road.

The nearest residence is approximately 875 feet from the western property line of the existing quarry operations and approximately 4,500 feet from the proposed quarry expansion area. Shaffer Elementary School is located 2.4 miles to the southeast of the Project Site. There are approximately 24 residences abutting Highway 395 and Center Road. Traveling farther west along Center Road, toward the California State Correctional Center, there are approximately six additional residences.

Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, there are no quantitative or formulaic methodologies to determine the presence of a significant odor impact. Rather, often air districts recommend that odor analyses strive to fully disclose all pertinent information. The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions.

Land uses and industrial operations that typically are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, solid waste transfer stations, rendering plants, dairies, and fiberglass molding. The proposed project would not fall into any of these categories. Operation of the proposed Project would result in fugitive dust and combustion emissions, which would not be expected to generate odors.

Notably, the primary wind direction is from the west and south. Therefore, the primary wind direction is from the residences towards the project site. Odor emissions are highly dispersive, especially in areas with higher average wind speeds. However, odors disperse less quickly during inversions or during calm conditions, which hamper vertical mixing and dispersion.

A majority of the proposed Project operations would occur from April through October which is not typically the season associated with inversion conditions (i.e., occur during wintertime). Inversion conditions may also result in odor impacts due to air stagnation. Given that the proposed Project would not operate during the months when inversion condition is more common, the likelihood of odor impacts due to the proposed Project would be reduced.

Lastly, based on information obtained from the Lassen County APCD, no complaints were filed related to odor issues (including the existing asphalt plant) in the past five years. Given the previous information, odor impacts associated with the location of the proposed Project would be less than significant.

4.4.6 Mitigation Measures

MM 4.4-1: The Project applicant shall ensure compliance with Lassen County APCD rules for fugitive dust emissions. Based on Lassen County APCD Rule 4:18 (Fugitive Dust Emissions), reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including, but not limited to, the following provisions:

- *Cover trucks.* Covering open bodied trucks when used for transportation materials likely to give rise to airborne dust.
- *Filter and containment.* Installation and use of hoods, fans, and other fabric filters to enclose and vent the handling of dusty materials. Containment methods may be employed during sandblasting and other similar operations.

- *Dust suppression.* The application of asphalt, oil, water or suitable chemicals to dirt roads, material stockpiles, land clearing, excavation, grading or other surfaces which can give rise to airborne dusts.
- *Good housekeeping.* The prompt removal of earth or other material from paved streets onto which earth or other material for earth moving equipment, erosion by water, or other means has been deposited.

4.4.7 Level of Significance after Mitigation

Less than significant impact with mitigation incorporated.

4.5 Biological Resources

Expansion of the mining boundary of the current mining operation to include an additional 78.6 acres, increasing the life of the mine to 2050, and increasing the maximum annual volume removed from 100,000 to 200,000 tons are substantial changes proposed in the Project that will require major revisions of the previous EIR due to the involvement of potentially new significant environmental effects pertaining to biological resources or a substantial increase in the severity of previously identified significant effects under CEQA Guidelines §15162.

Expansion of the mining boundary and extension of the mine life could result in additional habitat and species impacts that were not analyzed in the 2019 EIR. As required under CEQA, setting information has been updated where necessary to reflect current conditions. The impact analysis presented is specific to the proposed Project.

4.5.1 Environmental Setting

A *Biological Resource Assessment* (BRA) was prepared for the Project in October 2020 and was updated in January 2022 by VESTRA Resources. The environmental information in this section is based off information contained in the BRA (refer to Appendix E, *Biological Resource Assessment*).

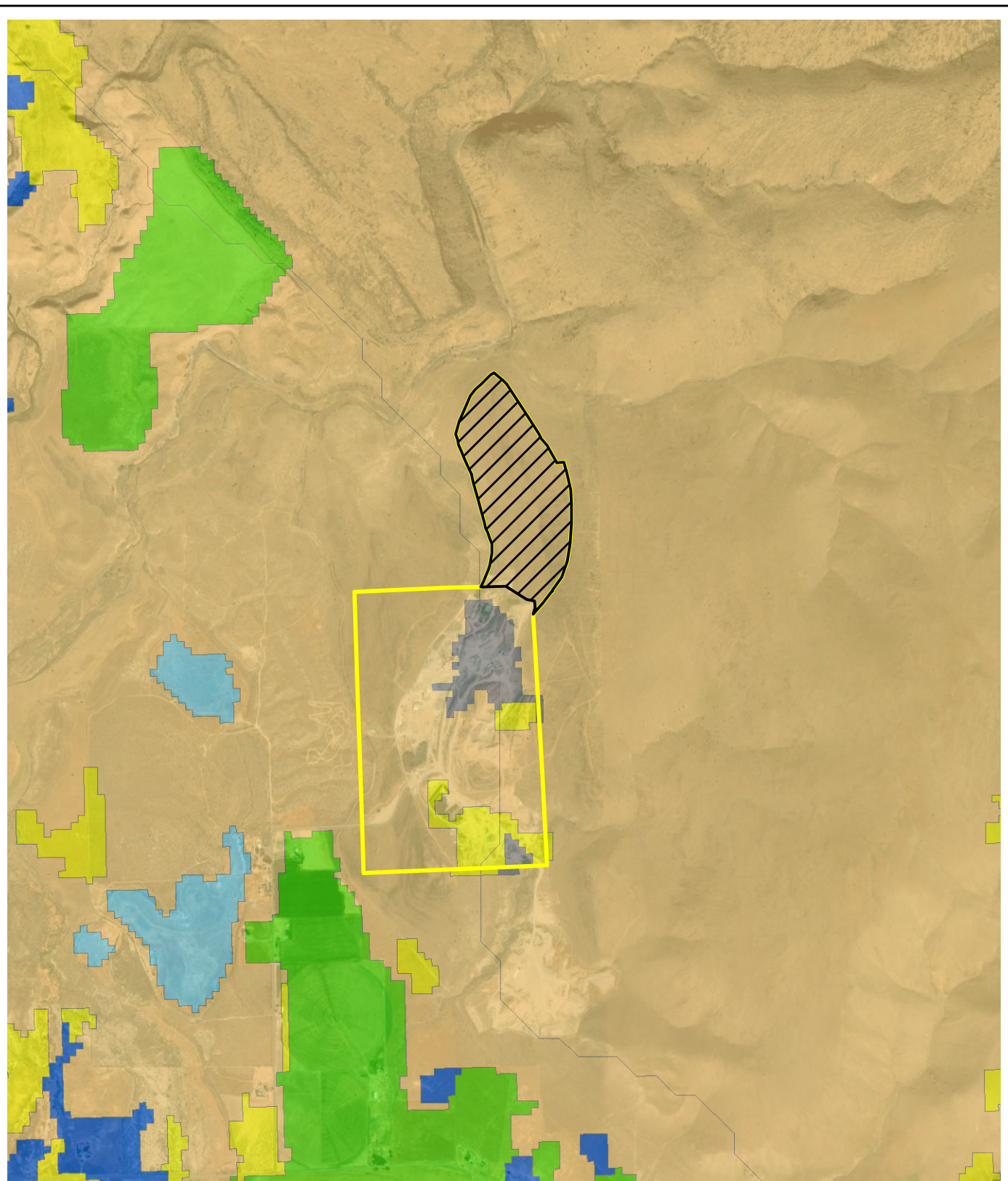
Site Vegetation

The mine site has operated since the early 1980s. Portions of the site are currently being mined or are developed for the processing of mined materials. Areas disturbed by previous mining and processing are considered barren. The remaining areas surrounding the quarry consist mainly of shrub steppe communities with interspersed areas of annual grassland. The dominant habitat type identified through the California Wildlife Habitat Relationships (CWHHR) classification is sagebrush (Mayer and Laudenslayer, 1988) as shown on Figure 4-3.

Sagebrush habitat borders the quarry operations area along the western and eastern edges. The proposed expansion area supports basin big sage (*Artemisia tridentata* ssp. *tridentata*). Within the expansion area, shrubs exhibit dense cover with very little bare ground in between and in some places the canopy overlaps, leaving little opportunity for forbs and grasses. Slopes surrounding the expansion area exhibit less dense cover. This supports a mix of basin big sage and mountain big sage (*A. tridentata* ssp. *vaseyana*). Openings between shrubs here have sparse to no ground cover; in areas with some ground cover present, forbs and grasses are present.

Aquatic Habitat

There are no wetlands or streams within the Project site. Aquatic features in the existing mine boundary include several constructed ponds near the northern boundary of the existing mining area as well as near the entrance to the quarry. These ponds were constructed to retain water from gravel washing and to capture stormwater runoff from the existing mining area. Drainage occurs as sheet flow to the southwest onto a terrace and then northwest into Balls Canyon, which eventually discharges into Willow Creek. Concentrated flows are observed only during heavy rain events. Secret Creek, an intermittent drainage, is located approximately 450 feet outside of the northern boundary of the proposed quarry expansion area.



Proposed Expansion Area



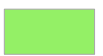
Project Site



Annual Grassland



Barren



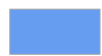
Cropland



Lacustrine



Sagebrush



Wet Meadow



0 1,000 2,000 4,000 Feet

SOURCE: USDA NAIP 2016 AERIAL PHOTOGRAPH; USFS 2009



FIGURE 4-3
CWHR HABITAT TYPES
WARD LAKE QUARRY
LASSEN COUNTY, CALIFORNIA

Special-Status Wildlife Species

An assessment of special-status species was conducted for the Project site to examine potential effects of expanding the mining area. Special-status species considered in the assessment meet one of the following criteria:

- Listed, proposed for listing, or candidates for listing as threatened or endangered under the Federal Endangered Species Act (ESA) (50 Code of Federal Regulations [CFR] Part 17.12 [listed plants], 50 CFR Part 17.11 [listed animals], 67 Federal Register [FR] 40657 [candidate species]);
- Listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA) (California Department of Fish and Wildlife [CDFW], 2017a);
- Identified by the CDFW as fully protected species, including fish and wildlife that do not have State or Federal threatened or endangered status but may still be threatened with extinction (CDFW, 2017b); and
- California Species of Special Concern: vertebrate species that have been designated as “species of special concern” by the CDFW because declining population levels, limited range, and/or continuing threats have made them vulnerable to extinction (CDFW, 2017b).

Table 4-13 lists the wildlife species identified by a California Natural Diversity Database (CNDDDB) search within five miles of the Project site, CWHR analysis or literature review regarding preferred habitats for these species, and an evaluation of their potential to occur within the Project area. A list of federally listed species that may occur in the Project area was obtained from the United States Fish and Wildlife Service (USFWS); these species are also addressed in Table 4-13, below.

Table 4-13 POTENTIALLY OCCURRING SPECIAL-STATUS WILDLIFE SPECIES			
Common and Scientific Names	Status Fed/State	Preferred Habitats	Known and Potential Occurrence in Project Area
Invertebrates			
Carson wandering skipper <i>Pseudocopaeodes eunus obscurus</i>	FE/--	Occurs east of the Sierra Nevada at elevations less than 5,000 feet; presence of salt grass; near nectar sources; near springs or other water bodies; and possibly near geothermal activity.	No potential for occurrence due to lack of suitable habitat; habitat known nearby at Honey Lake (alkali flat that supports salt grass); alkali soils and geothermal activity not present onsite.
Monarch butterfly <i>Danaus plexippus</i>	CE/--	Migratory; overwinter in central to south CA coast; breed through summer; breed throughout CA only where milkweed is found; require diversity of blooming nectar resources during breeding and migration.	Potential for occurrence due to potential habitat for milkweed (<i>Asclepias</i> spp.)
Amphibians			

Table 4-13 POTENTIALLY OCCURRING SPECIAL-STATUS WILDLIFE SPECIES			
Common and Scientific Names	Status Fed/State	Preferred Habitats	Known and Potential Occurrence in Project Area
Foothill yellow-legged frog <i>Rana boylei</i>	--/CSC	Slow-moving, gravelly streams and rivers with sunny banks in forests and chaparral	No potential for occurrence due to lack of gravelly streams or water bodies
Birds			
Tricolored blackbird <i>Agelaius tricolor</i>	--/CE	Nest near fresh water in adjacent vegetation, especially near marshes. Forage in grasslands and croplands	No potential for occurrence due to lack of suitable habitat
Golden eagle <i>Aquila chrysaetos</i>	--/CFP	Needs open terrain for hunting – grassland, desert, savannah, shrub. Nests on cliffs and in large trees	Potential for occurrence due to suitable foraging habitat
Northern harrier <i>Circus cyaneus</i>	--/CSC	Grasslands, fields, and marshes	Potential for occurrence due to suitable foraging habitat
Swainson's hawk <i>Buteo swainsoni</i>	--/CT	Large, open grasslands in riparian systems	Potential for occurrence due to some suitable foraging habitat
Greater sandhill crane <i>Grus canadensis tabida</i>	--/CT	Shortgrass plains, grain fields and open wetlands for foraging. Nests in wetlands	No potential for occurrence due to lack of suitable habitat
Greater sage-grouse <i>Centrocercus urophasianus</i>	--/CSC	Open, continuous sagebrush communities	Potential for occurrence due to suitable habitat
Burrowing owl <i>Athene cunicularia</i>	--/CSC	Open, dry grassland, desert, and shrub	None found during April 2020 survey. Potential for occurrence due to suitable habitat
Long-eared owl <i>Asio otus</i>	--/CSC	Roost in dense vegetation and forage in open grasslands or shrublands	Potential for occurrence due to suitable foraging habitat
Short-eared owl <i>Asio flammeus</i>	--/CSC	Large, open areas with low vegetation including prairie, grassland, shrubsteppe, agricultural areas	Potential for occurrence due to suitable habitat
Loggerhead shrike <i>Lanius ludovicianus</i>	--/CSC	Open areas with short vegetation and well-spaced shrubs or low trees	Potential for occurrence due to suitable habitat
Mammals			
Pallid bat <i>Antrozous pallidus</i>	--/CSC	Forages over many habitats; roosts in buildings, trees, rocky outcrops and crevices in mines and caves; also in oak and pine forested areas, usually near a source of water	Potential for occurrence due to suitable habitat
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	--/CSC	Found in all but subalpine and alpine habitats. Requires mines, caves, rock piles, and lava tubes for roosting	No potential for occurrence due to lack of suitable habitat
Gray wolf <i>Canis lupus</i>	FD/CE	Highly variable	No records in project vicinity in 93 years; has been located recently in other areas of Lassen County
North American wolverine <i>Gulo gulo luscus</i>	PFT/CT	Arctic, boreal, and alpine habitats. South of the Canadian border, restricted to high mountain environments near the treeline	No potential for occurrence due to lack of suitable habitat
American badger <i>Taxidea taxus</i>	--/CSC	Dry, open stages of shrub and forest with friable soils	Potential for occurrence due to suitable habitat
Pygmy rabbit <i>Brachylagus idahoensis</i>	--/CSC	Sagebrush, bitterbrush, and pinyon-juniper	Potential for occurrence due to suitable habitat
White-tailed jackrabbit <i>Lepus townsendii townsendii</i>	--/CSC	Sagebrush, subalpine conifer, juniper, alpine dwarf-shrub, and perennial grassland	Potential for occurrence due to suitable habitat
Notes: Federally Endangered (FE), Proposed Federally Endangered (PFE); Federally Threatened (FT); Proposed Federally Threatened (PFT); California Endangered (CE); California Threatened (CT); California Fully Protected (CFP); DFG California Species of Special Concern (CSC)			

Special-status wildlife species that are known to occur, or have the potential to occur, within the Project area include:

- Monarch butterfly (*Danaus plexippus*)
- Golden eagle (*Aquila chrysaetos*)
- Northern harrier (*Circus cyaneus*)
- Swainson's hawk (*Buteo swainsoni*)
- Greater sage-grouse (*Centrocercus urophasianus*)
- Burrowing owl (*Athene cunicularia*)
- Long-eared owl (*Asio otus*)
- Short-eared owl (*Asio flammeus*)
- Loggerhead shrike (*Lanius ludovicianus*)
- Gray wolf (*Canis lupus*)
- American badger (*Taxidea taxus*)
- Pallid bat (*Antrozous pallidus*)
- Pygmy rabbit (*Brachylagus idahoensis*)
- White-tailed jackrabbit (*Lepus townsendii townsendii*)

Impacts of the proposed Project to species determined to have potential to occur within the Project area are discussed under Impact 4.5-1 below, while species that were determined to be absent are not discussed further.

Special-Status Plants

Special-status plant species include plants that are:

- Designated as rare by CDFW or USFWS or are listed as threatened or endangered under the CESA or ESA;
- Proposed for designation as rare or listing as threatened or endangered;
- Designated as state or federal candidate species for listing as threatened or endangered; and/or
- Ranked as California Rare Plant Rank (CRPR) 1A, 1B, 2A, 2B, or 3.

A list of regionally occurring special-status plant species was compiled based on a review of pertinent literature, the results of the field surveys, and a review of the USFWS species list and CNDDDB, and a search of California Native Plant Society (CNPS) database records for the Litchfield quadrangle.

Consultations found no records of federally or State-listed threatened or endangered plant species within five miles of the Project area. Five plants ranked 1B or 2B by the CNPS are recorded in the CNDDDB within five miles of the proposed expansion area. For each special-status plant species, habitat and other ecological requirements were evaluated and compared to the habitats in the study area and immediate vicinity to assess the presence of potential habitat. The habitat assessment is provided in Table 4-14.

Table 4-14 POTENTIALLY OCCURRING SPECIAL-STATUS PLANT SPECIES				
Species	CRPR Status	Flowering Period	Habitat	Potentially Occurring
Winged dock (<i>Rumex venosus</i>)	2B.3	May-June	Great Basin scrub (sandy); 1200-1800 m	No
Western seablite (<i>Suaeda occidentalis</i>)	2B.3	July-September	Great Basin scrub (alkaline, mesic); usually in wetlands; 1200-1500 m	No
Playa phacelia (<i>Phacelia inundata</i>)	1B.3	May-August	Usually in wetlands; sagebrush scrub, lower montane coniferous forest; 1350-2000 m	No
Ornate dalea (<i>Dalea ornata</i>)	2B.1	June	Pinion-Juniper woodland; 1365-1700 m	Yes
Spiny milkwort (<i>Polygala subspinosus</i>)	2B.2	May-August	Sagebrush scrub, Pinion-Juniper woodland, gravelly, rocky; 1330-1705 m	Yes
Great Basin downingia (<i>Downingia laeta</i>)	2B.2	May-July	Great Basin scrub, Pinyon-Juniper woodland; usually in wetlands; 1220-2200 m	No
Holmgren's skullcap (<i>Scutellaria holmgreniorum</i>)	3.3	May-July	Great Basin scrub, Pinyon-Juniper woodland; 1310-1735 m	Yes
Notes: 1B.2: "moderately" rare, threatened, or endangered in California and elsewhere; 1B.3: "not very" rare, threatened, or endangered in California and elsewhere; 2B.1: "seriously" rare, threatened, or endangered in California but more common elsewhere; 2B.2: "moderately" rare, threatened, or endangered in California but more common elsewhere; 2B.3: "not very" rare, threatened, or endangered in California but more common elsewhere.				

Potential impacts to these plants with potential to occur at the Project site are discussed under Impact 4.5-1. Plants with no potential to occur are not discussed further. Consultations found no records of Federally or State-listed threatened or endangered plant species within five miles of the Project area.

Raptors and Migratory Birds

Raptor species (birds of prey) and migratory birds may nest in trees and other vegetation located within or in the immediate vicinity of the study area. All raptors and migratory birds, including common species and their nests, are protected from "take" under the California Fish and Game Code, Section 3503 and 3503.5, and the Federal Migratory Bird Treaty Act. Large trees onsite and in the surrounding forest provide potential nesting habitat for raptors and migratory birds.

Critical Habitat

The Project site is not located within designated critical habitat for any special-status species.

Sensitive Habitats

The California Sensitive Natural Communities List published on August 18, 2021, was reviewed due to the fact that big sage subspecies (*Artemisia tridentata* ssp.) are components of natural communities that are listed as S1, S2, and S3, and therefore warrant consideration under CEQA. None of the California Sensitive Natural Communities listed are present within the proposed expansion area. Mountain big sage (*Artemisia tridentata* ssp. *vaseyana*) and Idaho fescue (*Festuca idahoensis*) are present in the surrounding area; these would not be disturbed by proposed activities. Additionally, the current mine area will be planted with these two species during reclamation, which will increase the presence of this community in the long-term.

Mule Deer and Pronghorn Antelope Habitat

The mine site and the expansion area are identified as a Critical Winter Range for mule deer (Figure 4-4) (CDFW, 2021). The expansion area is also identified as a winter range for pronghorn antelope (Figure 4-5) (CDFW, 2020). Seasonal migration patterns of mule deer show utilization of high-elevation montane ranges in summer and use low-elevation ranges in fall and winter. Mule deer foraging habitat selection may be influenced by proximity to drinking water and presence of cover from predators. According to mule deer population studies, most activity occurs in early morning, late afternoon, and early evening. Mule deer exhibit strong site fidelity; home ranges usually are less than 1 mile in diameter (USDA Forest Service, 2006).

Critical deer winter range can include corridors essential for movement, staging areas where deer temporarily congregate, and habitats containing high quality winter forage. Shaffer Mountain is located at the southwestern corner of the critical winter range, and may provide relatively early-season foraging ground at its lower elevations and southern-facing slopes.

Pronghorn typically migrate between summer and winter ranges and may move up to 93 miles between ranges in California. Pronghorn are active yearlong. They are mostly crepuscular (active at dawn and dusk), but may be active during the day or night. Pronghorn diet is variable throughout the year; pronghorn migrate between summer and winter feeding ranges to follow seasonal forage availability. Previous population studies found that pronghorn kidding grounds are located adjacent to the Project area. In the Lassen area, pronghorn typically breed in late summer and give birth in May or June.

4.5.2 Regulatory Setting

The following is a description of federal, State, and local environmental laws and policies that are relevant to the CEQA review process for the proposed expansion area.




Federal

Federal Endangered Species Act

Section 9 of the federal Endangered Species Act of 1973 (ESA) prohibits acts that result in the “take” of threatened or endangered species. As defined by the federal ESA, “endangered” refers to any species that is in danger of extinction throughout all or a significant portion of its current range. The term “threatened” is applied to any species likely to become endangered within the foreseeable future throughout all or a significant portion of its current range. “Take” is defined as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.”

Sections 7 and 10 of the federal ESA provide methods for permitting otherwise lawful actions that may result in “incidental take” of a federally listed species. Incidental take refers to take of a listed species that is incidental to, but not the primary purpose of, an otherwise lawful activity. Incidental take is permitted under Section 7 for projects on federal land or involving a federal action; Section 10 provides a process for non-federal actions. The act is administered by the USFWS for terrestrial species.



-  Proposed Expansion Area
-  Project Site
-  Critical Winter Range

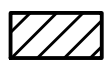
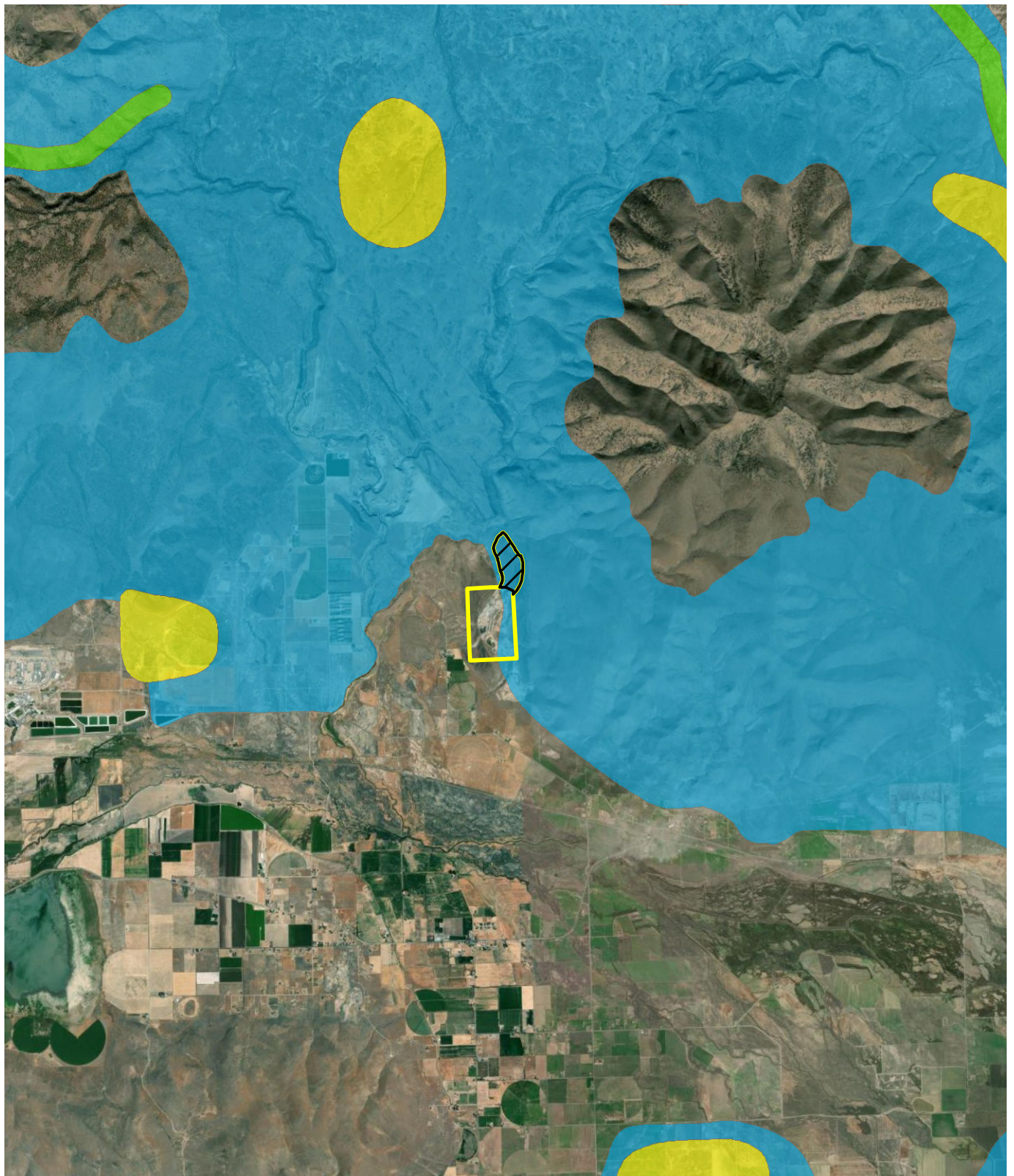


0 0.75 1.5 3 Miles



SOURCE: USDA NAIP 2016 AERIAL PHOTOGRAPH; USFS 2009

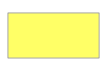
FIGURE 4-4
MULE DEER HABITAT
WARD LAKE QUARRY
LASSEN COUNTY, CALIFORNIA



Proposed Expansion Area



Project Site



Kidding Grounds



Migration Corridor



Winter Range

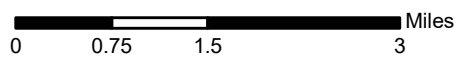


FIGURE 4-5
PRONGHORN ANTELOPE HABITAT
WARD LAKE QUARRY
LASSEN COUNTY, CALIFORNIA

SOURCE: USDA NAIP 2016 AERIAL PHOTOGRAPH; USFS 2009

Clean Water Act

The objective of the Clean Water Act (1977, as amended) is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Discharge of dredged or fill material into waters of the United States, including jurisdictional wetlands, is regulated by the Corps under Section 404 of the Clean Water Act (33 USC 1251-1376) under a permitting process. Applicants for Section 404 permits are also required to obtain water quality certification or waiver through the local Regional Water Quality Control Board under Section 401 of the Clean Water Act (33 USC 1341).

Corps regulations implementing Section 404 define waters of the United States to include intrastate waters, including lakes, rivers, streams, wetlands, and natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce. Wetlands are defined for regulatory purposes as “areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR 328.3; 40 CFR 230.3). To comply with the Corps policy of no net loss of wetlands, discharge into wetlands must be avoided and minimized to the extent practicable. For unavoidable impacts, compensatory mitigation is typically required to replace the loss of wetland functions in the watershed.

Because the Project will not result in impacts on waters of the United States, which would require authorization under Section 404, an Army Corps 404 permit and Section 401 water quality certification will not be required.

Migratory Bird Treaty Act

Migratory birds are protected under the Migratory Bird Treaty Act (MBTA) of 1918 (16 USC 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21).

State

California Endangered Species Act

The California Endangered Species Act (CESA) lists species of plants and animals as threatened or endangered. Projects that may have adverse effects on State-listed species require formal consultation with CDFW. “Take” of protected species incidental to otherwise lawful activities may be authorized under Section 2081 of the California Fish and Game Code. Authorization from the CDFW is in the form of an Incidental Take Permit which can identify measures to minimize take. CDFW Species of Special Concern are considered under the CESA. Species of Special Concern have the potential to occur within the Project area.

Streambed Alteration Agreement

A Lake or Streambed Alteration Agreement (Sections 1600-1616 of the California Fish and Game Code) requires an entity to notify CDFW prior to commencing any activity that may substantially obstruct the natural flow or use any material from a river, stream, or lake, or deposit or dispose of debris where it may pass into any river, stream, or lake. The notification requirement applies to any ephemeral or perennial river, stream, or lake in California. The Project will not occur within any river, stream, or lake and is not subject to a Lake or Streambed Alteration Agreement.

Birds of Prey

Under Section 3503.5 of the California Fish and Game Code, it is unlawful to take, possess, or destroy any birds in the orders of Falconiformes or Strigiformes (birds of prey) 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.

Migratory Birds

The California Fish and Game Code Section 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

Fully Protected Species

California statutes also accord “fully protected” status to a number of specifically identified birds, mammals, reptiles, amphibians, and fish. These species cannot be “taken,” even with an incidental take permit (California Fish and Game Code, Sections 3505, 3511, 4700, 5050, and 5515). Other than golden eagle, no “fully protected species” are expected to occur in the study area.

California Native Plant Protection Act

The California Native Plant Protection Act (California Fish and Game Code Section 1900-1913) prohibits the taking, possessing, or sale within the State of any plants with a state designation of rare, threatened, or endangered, as defined by the CDFW. An exception to this prohibition allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify the CDFW and give the agency at least 10 days to retrieve (and presumably replant) the plants before they are plowed under or otherwise destroyed. Fish and Game Code Section 1913 exempts from the “take” prohibition “the removal of endangered or rare native plants from a channel, lateral ditch, building site, or road, or other right-of-way.”

State CEQA Guidelines

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines §15380(d) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in the FESA and the Section of the California Fish and Game Code dealing with rare or endangered plants and animals. Section 15380(d) allows a public agency to undertake a review to determine if a significant effect on species that have not yet been listed by either the USFWS or the CDFW (e.g., candidate species, species of concern) would occur. Thus, CEQA provides an agency with the ability to protect a species from a project’s potential impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

Local

Lassen County General Plan Land Use Element

The *Lassen County General Plan* was adopted in September 1999. The General Plan contains a Land Use Element, Natural Resources Element, Agriculture Element, Wildlife Element, Open Space Element, Circulation Element, and Safety and Seismic Safety Element. The General Plan Land Use Element and Wildlife Element contain the following goals and policies related to biological resources:

GOAL L-22: Protection and enhancement of important wildlife habitats to support healthy, abundant, and diverse wildlife populations.

- Policy LU-49: The County supports the management and enhancement of wildlife resources in ways that enhance the health and abundance of wildlife populations and the diversity of species and their habitats and which, at the same time, balance management policies and program objectives with the range of social and economic needs for which the County is also responsible.

GOAL N-7: To maintain diverse and healthy vegetation communities in order to sustain natural and economic benefits, including watershed, soil stabilization, wildlife, fisheries, timberland, grazing, and scenic values.

- Policy NR25: The County recognizes that there are vegetation communities that warrant special consideration and protection, and that these areas may be regarded as important or significant vegetation communities or areas of special biological importance. These areas include, but are not limited to, bitterbrush plant communities, wetlands, and riparian areas.
- Policy NR26: In order to avoid or reduce the extent of potential adverse impact to important vegetation communities which may result from projects and land use decisions within its jurisdiction, the County shall consider the potential extent of such impacts in the course of project review.
- Policy NR27: Projects subject to County approval which will result in significant disturbance of a site's vegetative cover shall be required to prepare and implement an effective plan to revegetate disturbed, undeveloped areas of the site.
 - Implementation Measure NR-J: Pursuant to the California Environmental Quality Act, the County shall review the potential for impacts of proposed projects on vegetation resources and shall require appropriate mitigation measures to avoid, reduce, or compensate for the extent of significant adverse impacts. Such mitigation measures may include the clustering of housing and development to conserve natural vegetation and the implementation of revegetation plans. Plans and revegetation measures shall also include provisions to avoid the introduction of noxious weeds.

GOAL N-8: Protection of rare and endangered plant species balanced with the need to sustain productive, multiple land uses when possible.

- Policy NR28: The County recognizes the need to identify and provide reasonable measures for the protection of rare and endangered plant species in the consideration of projects and land use decisions.
 - Implementation Measure NR-K: Pursuant to the California Environmental Quality Act, the County shall consider the impacts of proposed projects on rare and endangered plant resources and shall require necessary mitigation measures to avoid, reduce, or compensate for the extent of significant disturbance.

GOAL N-9: Control invasive weeds and plant species.

- Policy NR29: The County supports strong measures to eliminate or prevent the spread of invasive and noxious weeds and plant species including, but not limited to, medusahead, yellow starthistle, and perennial pepperweed (whitetop), and to control the adverse effects from the excessive spreading of such species as juniper and cheatgrass.

GOAL N-13: To improve and diversify the County's industrial base by encouraging development of mineral resources in ways which avoid or minimize unacceptable levels of land use conflict and significant environmental damage.

- Policy NR47: In the consideration of proposed mining activities, the County shall balance goals of protecting and managing wildlife, vegetation, and other resources with the economic and social need to diversify the County's industrial base.

GOAL N-16: To prevent significant long-term environmental damage and damage of other natural resource values in areas which have been or which may be disturbed by mineral extraction.

- Policy NR58: Reclamation plans shall include a monitoring program to ensure successful compliance with reclamation criteria. Reclamation plans that include revegetation shall be monitored to ensure that planted vegetation successfully satisfies the objectives of the reclamation plan.
- Policy NR59: An adequate performance guarantee shall be required of a type and in an amount acceptable to the County to cover the costs of reclamation should the permittee fail to complete successful reclamation of a mined site. Performance guarantees shall be determined based on reclamation cost estimates prepared by a qualified professional.

GOAL O-3: To protect vital natural habitats and special natural resource areas.

- Policy OS-8: The County recognizes that some areas which are designated and zoned for development, including but not limited to rural residential lands and areas indicated for planned development, have natural resource and open space values which need to be addressed in the consideration of land use and development decisions and proposed development projects.
 - Implementation Measure OS-D: When the resource value of wildlife habitat on lands proposed for development necessitates additional protection measures, the County may utilize a "Natural Habitat Combining District" to include specific provisions for special building site area requirements, building exclusions areas, retention of habitat in designated areas, requirements for special review and approval of site development plans prior to issuance of development and building permits, and other provisions which, in the County's judgement, are necessary to allow development while providing appropriate levels of protection for the identified habitat.
 - Implementation Measure OS-E: The County will participate with resource management agencies, including the California Department of Fish and Game, the

U.S. Forest Service, and the Bureau of Land Management, in considering the scientifically documented need to protect specified open space resources, wildlife and plant species, and natural habitats, and in supporting effective and socially equitable measures to address those needs.

GOAL W-1: To protect and enhance the overall health of wildlife habitats and special resource areas to maintain healthy, abundant, and diverse wildlife populations.

- Policy WE-1: The County supports the management of wildlife resources in ways that enhance the health and abundance of wildlife populations and the diversity of species and their habitats and which, at the same time, balance management policies and program objectives with the range of social and economic needs for which the County is also responsible.
- Policy WE-2: The County supports the cooperative identification of “areas of significant wildlife value” or similar designations for areas where it is demonstrated by sound biological science and the habitat values are of significant importance to the health and/or survival of one or more species of wildlife. The county may apply a special designation to these areas, and/or agree to support specific resource management objectives, policies, and voluntary programs to protect wildlife resources within these areas.
- Policy WE-5: Prior to the imposition of substantial wildlife-related mitigation measures by the County, the County shall review evidence demonstrating that the proposed action or project could otherwise have potentially significant adverse impacts to wildlife and that the proposed measures will, in fact, help to accomplish practical and necessary mitigation objectives.
- Policy WE-6: Funding for wildlife habitat programs (e.g., wildlife mitigation funds), should be directed to protect and enhance wildlife resources in the county, especially when funds are generated in Lassen County.

GOAL W-2: Protection of rare, threatened, and endangered wildlife species with an ecosystem approach to habitat management which also supports multiple land uses.

- Policy WE-10: Through local coordination, the County encourages programs and actions to remove and avoid the listing of additional wildlife species as threatened or endangered by the state or Federal government. When listings are proposed, sound biology needs to be applied to the preparation of habitat management plans and/or recovery plans, and the related social and economic impacts of such plans and related measures need to be considered and mitigated.

GOAL W-5: Protect and enhance important upland habitat areas which include bitterbrush, mountain mahogany and aspen.

- Policy WE-17: The County supports cooperative efforts to protect and enhance the wildlife habitat values of upland vegetation communities of bitterbrush, mountain mahogany and aspen.

1986 Standish-Litchfield Area Plan

The *Standish-Litchfield Area Plan* was adopted in 1986 and was intended to guide decisions regarding land use for an approximate 20-year timeframe. The Area Plan contains three categories: Environmental Safety, Natural and Cultural Resources, and Community Development. The Area Plan contains the following goals, objectives, and policies related to biological resources:

GOAL: Recognize and protect wildlife and fishery resources by maintaining a policy for compatible relationships among habitats, parks, and residential development. Protect critical habitats from intrusion by incompatible uses.

GOAL: Protect the Planning Area's rare and endangered plants and animals.

GOAL: Provide for maximum feasible retention of natural vegetation in order to ensure watershed, wildlife, fishery, timberland, and scenic values to the area.

- Policy 9-A: Lassen County shall conserve and enhance the wildlife and fisheries of the area. Generally, those lands identified as significant wildlife areas by the Department of Fish and Game, with the exception of the "Belfast Initiative Area" shall be designated for Intensive or Extensive Agriculture, Conservation or Open Space.

Lassen County Code

Chapter 9.60 of the *Lassen County Code* (Surface Mining and Reclamation Plan Regulations) including performance standards for reclamation plans, findings for approval of mining operations in the County, requirements for annual inspections, and penalties for non-compliance with the use permit and/or reclamation plan. Section 9.60.090 of the *Lassen County Code* requires the following findings to be made prior to approving a reclamation plan:

- a. That the reclamation plan complies with Sections 2772, 2773, and 2773.1 of SMARA and any other applicable provisions;
- b. That the reclamation plan complies with applicable requirements of State regulations; (14 Cal. Admin., Sec. 3500 et seq.);
- c. That the reclamation plan and potential use of reclaimed land pursuant to the plan are consistent with County Code Chapter 9.60 and the County's general plan and any applicable resource plan or element;
- d. That, through the reclamation plan, all significant adverse impacts on lands to be reclaimed as a result of the surface mining operations are mitigated to the maximum extent feasible;
- e. That the land and/or resources, such as water bodies, to be reclaimed will be restored to a condition that is compatible with and blends in with the surrounding natural environment, topography, and other resources, or that suitable off-site development will compensate for related disturbances to resource values;
- f. That the reclamation plan will restore the mined lands to a usable condition which is readily adaptable for alternative land uses consistent with the general plan and applicable resource plan;
- g. That a written response to the State Geologist has been prepared, describing the disposition of major issues raised by the State Geologist. Where the County's position is at variance with the recommendations and objections raised by the State Geologist, said response shall address, in detail, why specific comments and suggestions were not accepted. (SMARA, Sec. 2772(d)) (Ord. 509 § 2, 1992).

4.5.3 Previous CEQA Reviews

1981 EIR

The 1981 EIR assessed potential project impacts to non-game birds, mammals, and reptiles likely to occur in the habitat within the project site. Potential effects to pronghorn and mule deer were found to be significant though mitigable due to the animals' seasonal migration patterns. Topographical changes within the project quarry areas were also found to be significant and mitigable. Long-term impacts to wildlife due to levels of noise, disturbance, and activity within the project area and upon access roads were found to be significant and not mitigable. The following measures related to pronghorn and mule deer were included in the 1981 EIR:

- a. Limits on operations from December 1st to March 31st annually. Proposed project operations are governed by weather conditions with an anticipated working season of April through November. Minimal activity could occur on mild winter days. Mitigation of the impact on wildlife was primarily relegated to climatic conditions wherein the effects of cold weather prompt wildlife to move down into lower elevations and coincidentally brings about the winter suspension of the plant operations.*
- b. Improving wildlife foraging habitat. Cooperation and assistance from both the California Department of Fish and Game (CA Department of Fish and Wildlife [CDFW]) and the Soil Conservation Service (Natural Resources Conservation Service [NRCS]) would be sought in order to determine the most suitable range grasses to be used in the reseeded process to allow for return of the land to suitable grazing and for efficient erosion control in quarry areas and along roadways.*

1997 EIR

The 1997 EIR prepared for addition of the ready-mix concrete plant, increase in height of the quarry face, and expansion of the season of operation from 7 months to year-round focused on potential effects on deer and antelope herds. The 1997 EIR for the expansion of the Ward Lake Pit focused on potential effects on deer and antelope herds. The Project area is on the edge of CDFW-designated critical winter-range habitat for mule deer (Figure 4-4) and winter-range habitat for pronghorn antelope (Figure 4-5). Mule deer numbers have increased since the 1997 EIR.

The 1997 EIR also addressed effects to Swainson's hawk and golden eagle. Potential effects of the Project on Swainson's hawks and golden eagles were discounted because the Project only involved the removal of 40 acres of foraging habitat, but no nesting habitat removal. Impacts to deer and antelope herds were determined to be significant and mitigable in the 1997 EIR. In addition, impacts to other wildlife species including Swainson's hawk, golden eagle, and small game and nongame species was determined to be significant and mitigable as well. The 1997 EIR contained the following mitigation measures for biological resources:

- a. Reclamation of graded areas. The intent of the Reclamation Plan shall be to recreate to the extent possible a viable, self-sustaining plant community similar to that which existed prior to mining.*

Sand and Gravel Excavation Areas: *These areas shall be regraded to maximum slopes of 2H:1V, shall be resoiled with adequate growth medium to support vegetation including fines from the crusher and stockpiled topsoil and shall be revegetated with native species including sage, bitterbrush, and rabbit brush. The success of revegetation in these areas shall be monitored by qualified personnel with reports submitted*

to the County Community Development Department at least once per year for five years. The final approved species list and planting density must be approved by the County in Consultation with the Department of Fish and Game.

Rock Quarry Area: *This area shall be regraded to a maximum overall slope of 2H:1V and shall be benched with minimum 10 foot wide benches at vertical intervals appropriate for the type of material, but not greater than 15 feet. The benches shall be sloped to drain toward the hillside, shall be resoiled with adequate growth medium to support vegetation including fines from the crusher and stockpiled topsoil and revegetated using native range grasses, shrubs, and trees if they can be supported. The operator shall institute a test plot program on the first available rock face bench to determine the best species mix and planting scheme for subsequent benches. The test plots shall be set up and monitored by qualified personnel with reports submitted to the County Community Development Department at least once every year for five years. The final approved species list and planting density must be approved by the County in consultation with the Department of Fish and Game.*

Timing/Phasing of Reclamation: *Reclamation of sub-areas shall take place in a phased manner where possible as excavation is completed.*

Protection of Replanted Areas: *Replanted areas shall be protected by fencing intended to exclude livestock and deer until vegetation is established. Perimeter livestock fencing shall be provided and shall be four wires maximum, bottom wire smooth and no closer than 19 inches to the ground with total fence height not to exceed 42 inches. More site-specific deer proof fencing shall be provided directly around replanting areas.*

- b. Limits on Operations from December 1st to March 31st. No grading or equipment use on the site shall be allowed between December 1st and March 31st annually.*

The seasonal restriction of operations was recommended by CDFW and included in the 1997 EIR, citing the critical period for pronghorn and mule deer populations in the area; pronghorn and mule deer seasonally migrate to habitat in lower elevations during the late winter and early spring due to reduced food availability at high elevations. In 1997 the Lassen County Planning Commission recommended that the Lassen County Board of Supervisors amend the season of restricted operations due to economic infeasibility of a four month closure. Economic losses said to potentially result from the four month annual closure would impact the mine as well as the surrounding community; a disruption of mining operations would lead to a loss of employee payroll, place a higher demand on social services in the community, and reduce availability of mined materials in the surrounding area. The Lassen County Board of Supervisors approved an alternative measure as stated in the Conditions of Approval for Use Permit No. 96056:

Except in a state of emergency, as declared by the local Emergency Services Director and/or the Board of Supervisors and/or the City of Susanville, no grading, excavating, or blasting on the site shall be allowed between January 1st and March 31st annually.

Recognizing that this would result in significant adverse unavoidable impacts to deer and antelope, the County adopted a Statement of Overriding Considerations with respect to these impacts.

2019 EIR

The 2019 EIR analyzed impacts to biological resources from allowing 24-hour mining operations, extending the life of the mine from 2020 to 2030 and allowing annual site production in excess of the permitted 100,000 tons during declared emergencies. The EIR focused on impacts to biologic resources from nighttime operations as well impacts from increased nighttime truck traffic on area roadways.

Project-level and cumulative impacts of onsite nighttime operation and traffic were determined to have a less than significant impact on any special-status species in the area. No mitigation measures were required for this impact. Impacts of nighttime operations to pronghorn antelope, mule deer and nocturnal foragers from additional noise and light levels and increased traffic impacts were determined to be significant and mitigable. The 2019 EIR contained the following mitigation measures for biological resources:

- a) *Operator shall continue limits on operations from January 1st to March 31st. Impacts can be lessened through continuing seasonal operating restrictions included in the Condition of Approval for Use Permit No. 96056: Except in a state of emergency, as declared by the local Emergency Services Director and/or the Board of Supervisors and/or the City of Susanville, no grading, excavating, or blasting on the site shall be allowed between January 1st and March 31st annually.*
- b) *Operator shall conduct no nighttime operations (7:00 p.m. to 6:00 a.m.) during the period of January 1st to March 31st. Applying the existing operational restrict to the proposed nighttime operations would eliminate additional disturbance/displacement of pronghorn antelope and mule deer utilizing the winter habitat during the winter months.*
- c) *Year-round nighttime restrictions. No grading, blasting, or excavating shall be allowed onsite between the hours of 6:00 p.m. and 7:00 a.m.*
- d) *Lighting fixture design. To minimize the effects of lighting of artificial light on wildlife, lighting fixtures associated with nighttime project work shall be downward facing and fully shielded. Lighting equipment should be designed and installed to minimize light pollution.*
- e) *Noise reduction barriers. Adverse effects from noise may be reduced through installation of noise berms constructed around the project area where heavy machinery is in use. Barriers can eliminate or minimize the impacts of vibrations that may result from nighttime operations.*
- f) *No “jake brake” usage. This option can significantly reduce the noise impacts from the increased traffic volume. “No use of jake brake” signs shall be posted on the access road and at the Center Road (A27) and Ward Lake Road intersection.*
- g) *Wildlife crossing signage on roadways. This option would educate drivers about the potential for wildlife encounters on roads during the nighttime hours. Signage will be permanent. This measure can prevent direct mortalities to nocturnal wildlife. Signs will be added along Center Road and Ward Lake Road with County approval.*
- h) *Reduce traffic speed on roadways. This mitigation would reduce the speed limit in order to minimize traffic impacts to wildlife. “Reduce speed to 25 MPH” signs would reduce the speed limit on Ward Lake Road during nighttime hours, granting a longer reaction time should any wildlife be encountered on a roadway.*

- i) *Driver education. Hat Creek Construction will conduct education events to increase driver awareness to avoid wildlife vehicle impacts.*

The 2019 EIR stated that the addition of periods of 24-hour operations would result in additional disturbance to pronghorn antelope and mule deer by extending onsite operational noise to nighttime hours and introducing nighttime lighting. 24-hour operations could have a significant impact if these operations were to occur in the period from December to March. To minimize potential impacts on antelope and deer, nighttime operations are prohibited from January 1st to March 31st. Nighttime operations between April 1st and December 31st could result in potential encounters on roadways with pronghorn antelope and mule deer during dawn and dusk. Impacts to the above biological resources after implementation of the above measures were found to be less than significant for Project-level and cumulative impacts.

Impacts related to extending the life of the mine by an additional 10 years, from 2020 to 2030 were determined to be significant and unavoidable. Extension of the life of the mine for 10 years would extend the significant impact of the operation to pronghorn or mule deer. The 2019 EIR concluded that no additional impacts to pronghorn or mule deer would occur; however, it would extend impacts that have been determined to be significant and unavoidable. Extending the life of the mine would also prolong the amount of time before the site can be reclaimed back to habitat for these species. Project-level and cumulative impacts related to extending the life of the mine were found to be significant and unavoidable. The County adopted a Statement of Overriding Considerations with respect to these impacts.

4.5.4 Thresholds of Significance

In accordance with CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the project. The following significance thresholds related to *Biological Resources* have been derived from Appendix G of the CEQA Guidelines:

- *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 (USFWS).*
- *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or USFWS.*
- *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.*
- *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.*
- *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*

- *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.*

4.5.5 Impact Analysis

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

Areas of No Project Impact

As required by CEQA Guidelines §15082, the County issued a Notice of Preparation (NOP) on April 28, 2021 that summarized the proposed Project, stated its intention to prepare an EIR, and requested comments regarding the scope and content of the EIR from responsible and trustee agencies. In the course of the County's initial evaluation, certain impacts of the proposed Project were found to not to be significant because of the inability of a project of this scope to create such impacts or the absence of project characteristics producing effects of this type. The effects determined not to be significant are not required to be included in primary analysis sections of the DSEIR. As such, the following impacts either are not applicable to the proposed Project or are not reasonably foreseeable and are not addressed further within this section:

- *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or USFWS.*

Based on the BRA (Appendix E) the proposed quarry expansion area does not include sensitive natural communities.

- *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.*

Based on the BRA (Appendix E) the proposed quarry expansion area does not include any wetlands or other potential waters of the U.S. or State; therefore, the proposed Project will not result in impacts to riparian areas, or result in removal, filling, or hydrological interruption of wetlands or potentially jurisdictional waters.

- *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*

As discussed above under the Regulatory subsection, the *Lassen County General Plan* and *Standish-Litchfield Area Plan* address the need to preserve unique and important plant communities as well as aquatic, fish, and wildlife habitats, for their biological resource and ecological values. The proposed Project would not conflict with any local policies or ordinances protecting biological resources or a tree a preservation policy or ordinance.

- *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.*

There are no habitat conservation plans, natural community conservation plans, or related documents for the area for which the proposed Project could conflict.

Project Impacts

Impact 4.5-1: 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 (USFWS).

The BRA prepared for the proposed quarry expansion identified 14 special-status wildlife species as having the potential to occur within the Project area. Three special-status plant species could also potentially be present. Potential effects to these species as well as raptors and migratory birds protected by federal and State regulations are discussed below.

Special-Status Wildlife Species

Golden Eagle (*Aquila chrysaetos*) – California Fully Protected

The golden eagle is listed by the State of California as Fully Protected, which prohibits take or possession of the species. Golden eagles are short-distance migrants, particularly in the western United States. This species is a year-round resident throughout California; limited migration occurs to the Central Valley during the winter. These birds typically hunt over the open terrain of grasslands, deserts, savannah, shrub, and early successional forests. They nest on cliffs of variable heights and in large trees in open habitats where perches on rock ledges, trees, or other tall objects provide good vantage for hunting. Common prey for golden eagles includes small mammals, birds, and reptiles. They sometimes take advantage of carrion, in such cases they can outcompete other scavengers for carcasses. Threats to this species include loss of foraging areas, loss of nesting habitat, pesticide poisoning, and collision with man-made structures such as wind turbines.

The site was assessed for potential nesting habitat as described in the USFWS “*Protocol for Golden Eagle Occupancy and Reproduction Assessment*”. No golden eagles were observed onsite. No trees occur onsite that could provide nesting habitat for golden eagles. Golden eagles have been observed (per CNDDDB) within five miles of the site, and there is foraging habitat within the expansion area as the sagebrush onsite is inhabited by prey species. The proposed quarry expansion would result in the loss of 78.6 acres of sagebrush foraging habitat for the golden eagle.

Northern Harrier (*Circus cyaneus*) – State Species of Special Concern

The northern harrier is listed by the State of California as a Species of Special Concern. This species is a common winter resident and occurs in greater numbers in California during migration and winter, as many populations travel farther north to breed. Some populations remain in California and the historic breeding range extended from the Modoc Plateau south to San Diego. Breeding in California has greatly declined due to loss of suitable wetland habitats. Although most suitable habitat has been destroyed or degraded, the Central Valley still supports the majority of nesting in California. Northern harriers inhabit a variety of open habitats that provide vegetative cover including grasslands, coastal ponds/sloughs, coastal marshes, coastal wetlands, salt marshes, and sagebrush areas.

According to CNDDDB, there are no known occurrences within five miles of the proposed expansion area. However, northern harriers may nest in sagebrush flats several miles from water, and there is potential nesting and foraging habitat within the 78.6-acre expansion area.

Swainson's Hawk (*Buteo swainsoni*) – State Threatened

The Swainson's hawk was listed as a threatened species in 1983. This species breeds in the western United States and Canada and winters in isolated areas in California, Mexico, and Central and South America, though only a small number have been documented to overwinter in California. Historically found throughout California except in the Sierra Nevada, North Coast Ranges and Klamath Mountains, loss of suitable habitat has now restricted breeding areas to the Great Basin and the Central Valley. Nesting Swainson's hawks require large open areas of grassland for foraging adjacent to riparian forests or corridors, juniper-sage flats, or oak savannah for nesting. The main cause of the decline of this species in California is the significant loss and degradation of open areas, such as agricultural lands and grasslands, due to urban development.

There are no records of Swainson's hawks within the Project area in the CNDDDB, but there are three records of nesting hawks within five miles of the Project area. All of these records are located in irrigated farmland. There is no irrigated agricultural habitat or other suitable nesting habitat for Swainson's hawk within the project area; however, there is potential foraging habitat within the 78.6-acre expansion area as the sagebrush onsite is inhabited by prey species.

Greater Sage-Grouse (*Centrocercus urophasianus*) – State Species of Special Concern

The greater sage-grouse is listed by the State of California as a Species of Special Concern. The species was considered for listing under the ESA as Endangered or Threatened in 2015, but the USFWS found that listing was not warranted. This species is a permanent resident in northeastern California and ranges from the Oregon border along the east side of the Cascade Range and Sierra Nevada to northern Inyo County. Lassen and Mono Counties have the most stable populations in California. Greater sage-grouse inhabit open areas with a combination of sagebrush, perennial grassland, and wet meadow; large, continuous tracts of sagebrush habitat are required for courtship displays. Declining population numbers are due mostly to habitat loss, impacts of non-native invasive species, and overgrazing.

There are no records of greater sage-grouse within five miles of the project area in the CNDDDB; the closest record is 58 miles to the north. No leks or signs of sage grouse activity were located in the proposed project area during the field surveys; however, potential breeding and nesting habitat exists in the open sagebrush areas of the Project area.

Burrowing Owl (*Athene cunicularia*) – State Species of Special Concern

The burrowing owl is listed by the State of California as a Species of Special Concern. This species is a permanent resident in the Central Valley and southern California. These birds inhabit northeastern California during the summer breeding season. Burrowing owl habitat typically consists of open grasslands and shrublands with perches for hunting and burrows for nesting.

Nesting usually occurs in vacant mammal burrows but, where burrows are scarce, these owls may use human structures or dig their own burrows in soft soil. This species exhibits strong site fidelity. These owls forage at all hours of the day and night. Populations are still stable but have been declining, mostly due to habitat loss from agriculture and development and poisoning of ground squirrels.

A protocol-level survey for burrowing owls was completed in 2020. The survey followed the *Burrowing Owl Survey Protocol and Mitigation Guidelines*, published by the California Burrowing Owl Consortium, and covered the 78.6-acre quarry expansion area and a 500-foot buffer around the expansion area. The results of the survey are documented in the *Burrowing Owl Survey, Ward Lake Quarry, Lassen County, California* (VESTRA, 2020a), included in Appendix E.

A desktop pre-survey review of the CNDDDB showed that there are two documented occurrences of the burrowing owl in Lassen County; the nearest is approximately ten miles east of the project area. There are no previous records of the species in CNDDDB within 5 miles of the expansion area.

A pedestrian transect survey of the 78.6-acre expansion area and 500-foot buffer was completed by VESTRA on March 31, 2020, to determine the presence of burrows. The survey began at 1:30 p.m. and concluded at 4:30 p.m. Transect spacing was selected to achieve full visual coverage of the ground within any potential burrowing habitat onsite. Habitat quality factors that were considered included topography and soil depth that could potentially support burrows. Transect spacing depended on vegetation density, slope, and the occurrence of large rock outcroppings. Tracks, feathers, pellets, and other sign items that may indicate a burrow were considered during the survey.

No burrows were observed during the survey that appeared to be able to accommodate an animal the size of a burrowing owl. However, the expansion area contains suitable nesting and foraging habitat for burrowing owls.

Long-Eared Owl (*Asio otus*) – State Species of Special Concern

The long-eared owl is listed by the State of California as a Species of Special Concern. This species is a permanent resident throughout California, except the Central Valley and southern California. Long-eared owls roost and nest in dense vegetation, typically live oak thickets and other dense tree stands, especially in riparian areas. These owls hunt in open grasslands and shrublands. This species does not build their own nests; nesting usually occurs in old bird and squirrel nests. These are nocturnal owls that forage during nighttime hours. Resident populations have been slowly declining since the 1940s due mainly to habitat loss and fragmentation.

There are no records of long-eared owls within five miles of the project area in the CNDDDB. There are currently no known nesting sites located in or near the project area, and there is no suitable dense nesting vegetation for the long-eared owl in the area. However, there is suitable foraging habitat for the species within the expansion area.

Short-Eared Owl (*Asio flammeus*) – State Species of Special Concern

The short-eared owl is listed by the State of California as a Species of Special Concern. This species is a permanent resident in northeastern California and a widespread winter migrant in the Central Valley and western Sierra Nevada. Short-eared owls roost on the ground in dense, low vegetation, typically tall grasses, brush, or wetlands. Nests are made on dry ground concealed in vegetation. These owls hunt in open areas including annual and perennial grasslands, shrublands, marshes, and agricultural fields; grasslands are most preferred. Short-eared owls are active mostly at twilight and nighttime hours, but are often active during the day in the breeding season. There is not a lot of available data on short-eared owl populations, but populations appear to be declining over most of the range because of habitat loss and fragmentation, and overgrazing. There are no records of

short-eared owls within five miles of the Project area in the CNDDDB. There are currently no known nesting sites located in or near the Project area, and there is not enough suitable grassland within the area for nesting. However, there is some suitable foraging habitat within the open shrubland of the Project area and surrounding areas.

Loggerhead Shrike (*Lanius ludovicianus*) – State Species of Special Concern

The loggerhead shrike is listed by the State of California as a Species of Special Concern. This species is a permanent resident and winter migrant in lowland and foothill areas throughout California. This species typically inhabits open areas with scattered shrubs, trees, and perches, including agricultural fields, pastures, orchards, scrublands, and riparian areas. These birds roost and nest in shrubs or small trees. Loggerhead shrikes are diurnally active. Populations in the Pacific states have remained fairly stable, but numbers have declined elsewhere in their range. Declines are likely due to increased use of pesticides.

There are no records of loggerhead shrikes within five miles of the project area in the CNDDDB. There are currently no known nest occurrences located in or near the Project area, and it is not likely that loggerhead shrike would nest in the project site. However, there is potentially suitable foraging habitat for the loggerhead shrike within the open shrubland of the Project area and surrounding areas.

Monarch Butterfly (*Danaus plexippus*) - Federal Candidate Endangered

Monarch butterflies have several life forms that make up their life history: egg, caterpillar (larvae), chrysalis, and adult stage. This species is migratory, with a well-known migratory path that can extend as far as 3,000 miles. Monarch butterflies in Western North America overwinter in California, with most occurring along the central coast from Santa Cruz south to San Diego, California. An estimated 4.5 million monarchs overwintered on the California coast in the 1980's, while in 2020, the population of overwintering monarchs was estimated at less than 2,000 individuals. Monarchs rely on their host plant species, milkweed (*Asclepias* spp.). These plants can grow in a variety of habitats. There is potential for milkweed to occur in grassy openings within shrubland. There is little open grassland in the proposed quarry expansion area; however, there is potential for recruitment following vegetation removal.

Lassen County is in the “Priority 2” restoration zone for western monarchs in California. Restoration objectives focus on identifying and protecting existing native milkweed and nectar plants, and planting pesticide-free native milkweed and nectar plants. Monarchs are likely to be present in the general Project area from May 16th to September 30th (USFWS, 2021).

Gray Wolf (*Canis lupus*) - Federally Endangered; California Endangered

The gray wolf was listed as endangered on March 9, 1978 (USDI FWS, 1978). Gray wolves are habitat generalists and can potentially occur in a wide range of habitats including temperate forest, mountains, tundra, taiga, and grasslands, so long as there is suitable prey. Prey species primarily include ungulates, such as moose, caribou, deer, and elk, but they will also take smaller prey such as beaver and small mammals, and will readily scavenge.

This species is highly territorial and defends territories in packs. Territory size is a function of prey density and can range from 25 to 1,500 square miles. Both male and female wolves disperse at equal rate and equal distances, sometimes more than 600 miles. Gray wolves once ranged throughout the northern hemisphere, but widespread trapping and extermination efforts severely

reduced their distribution and caused dramatic population declines. Current threats to the gray wolf include continued conflict with humans, primarily resulting from livestock depredation, and habitat loss, degradation, and fragmentation due to land development.

The last recorded observation of gray wolf in the project vicinity was in 1924 near Litchfield, California. However, the wolf has a large home range and range expansion is documented and could result in wolves reinhabiting the area at some point. CDFW has collected evidence (GPS tracking collar and remote trail camera images in 2016) that suggests that a small number of wolves have traveled into Lassen County (CDFW, 2017).

Due to the small project footprint relative to the large home range size of the gray wolf, the proposed project will not alter an amount of habitat significant enough to have any impact on the species. Further, gray wolves are highly mobile and capable of avoiding project-related disturbance. Therefore, the proposed quarry expansion will have no effect on the gray wolf.

American Badger (*Taxidea taxus*) – State Species of Special Concern

The American badger is listed by the State of California as a Species of Special Concern. These animals are permanent residents throughout most of California, except for the far northern North Coast area. Suitable habitat for this species is characterized by herbaceous, shrub, and open stages of most habitats with dry, friable soils. Dry, friable soils, often sandy, are required because badgers eat mostly fossorial (i.e., occurring underground) rodents, and they also take cover and reproduce in burrows. Badgers are active both day and night, and they may undergo periods of torpor in the winter. Populations are considered to be fairly stable but have declined due to historical trapping, conversion of habitat to intensive agriculture, and rodent poisoning.

There are no records of American badgers within five miles of the project area in the CNDDB; however, there is suitable habitat within the open shrubland of the project area and surrounding areas. No American badgers, signs of badgers, or burrows were observed during the site surveys. Due to sensitivity to noise, badgers in surrounding areas would likely avoid the project area due to a close proximity to ongoing operations in the current mining area. No direct impacts to American badgers are anticipated.

Pygmy Rabbit (*Brachylagus idahoensis*) – State Species of Special Concern

The pygmy rabbit is listed by the State of California as a Species of Special Concern. In California, this species is uncommon in the Great Basin areas of Modoc, Lassen, and Mono Counties. These rabbits can be found in sagebrush, bitterbrush, and pinyon-juniper habitats, and they prefer big sagebrush because it makes up the majority of their winter diet. Pygmy rabbits dig burrows for food storage and reproduction. This species is crepuscular and sometimes active during the day. Populations exhibit patchy distributions and are extremely varied across the species range. Because the species is dependent on big sagebrush, it is vulnerable to habitat loss and fragmentation from habitat conversion and fire.

There are no CNDDB records of these rabbits within five miles of the project area, and no pygmy rabbits were observed during site surveys. However, there is suitable foraging habitat for this species, so they could potentially occur. The proposed quarry expansion would result in the loss of 78.6 acres of sagebrush foraging habitat for the species.

White-Tailed Jackrabbit (*Lepus townsendii townsendii*) – State Species of Special Concern

The white-tailed jackrabbit is listed by the State of California as a Species of Special Concern. This species is an uncommon, permanent resident of northeastern California and the upper eastern slopes of the Sierra Nevada. These rabbits prefer open areas with scattered shrubs, including sagebrush, subalpine conifer, juniper, alpine dwarf-shrub, and perennial grassland, but are also found in wet meadow habitat and early successional stages of conifer forests. These animals move seasonally from higher to lower elevations in winter. Sagebrush is an important part of the winter diet. This species is primarily nocturnal and sometimes crepuscular. There is little available data on the status of populations in California, but evidence indicates sharp declines. It is thought that white-tailed jackrabbits may now be absent from large tracts of its previous range. Overgrazing is thought to be the main cause of habitat fragmentation.

There are no CNDDB records of these rabbits within five miles of the Project area; however, there is suitable foraging habitat for this species, so they could potentially occur. The proposed quarry expansion would result in the loss of 78.6 acres of sagebrush foraging habitat for this species.

Pallid Bat (*Antrozous pallidus*) – State Species of Special Concern

The pallid bat is listed by the State of California as a Species of Special Concern. These are crevice-roosting bats of arid and semi-arid regions across much of the American West. They are a locally common species of low elevations. This species is not known to migrate long distances and they likely hibernate close to summer roosts. They are found in a variety of habitats including grasslands, shrublands, and woodlands, but are most common in open, dry regions with rocky outcroppings or sparsely vegetated grasslands. Water must be available close by to all sites. They typically will use three different types of roosts: a day roost which can be a warm, horizontal opening such as in attics, shutters, or crevices; the night roost is in the open, but with foliage nearby; and the hibernation roost, which is often in buildings, caves, or cracks in rocks. These bats are very sensitive to roosting site disturbance.

There are no records of pallid bats within five miles of the Project area in the CNDDB, and no bats or sign of bats were observed in rock outcroppings during the site survey. However, there is suitable foraging habitat within the open shrubland of the Project area and surrounding areas, and rock outcroppings in the proposed quarry expansion area could provide roosting habitat.

Special-Status Plants

Spiny Milkwort (*Polygala subspinos*) – CRPR 2B.2

Spiny milkwort is a perennial herb native to California. It grows in gravelly or rocky soils found in desert scrub and volcanic mesas from 1350 to 2285 meters in elevation. This species is ranked by CDFW as 2B.2, i.e., moderately rare, threatened, or endangered in California but more common elsewhere.

Spiny milkwort (*Polygala subspinos*) was observed due east of the current mining operations in 2019. The plant was observed growing on a southwest-facing, steep, rocky slope growing among other vegetation including perennial grasses and annual forbs.

Spiny milkwort was not detected in the expansion area during the field surveys; however, the species has the potential to occur within the project area due to the gravelly and rocky soils that

exist in the proposed quarry expansion area. A botanical survey for this species in accordance with CDFW protocols will be conducted prior to vegetation removal activities within the expansion area to determine the presence of this species. If detected, measures contained below will be implemented.

Ornate Dalea (*Dalea ornata*) – CRPR 2B.1

Ornate dalea is a perennial forb that is native to California and commonly grows on open, rocky hillsides at elevations between 1365 and 1700 meters. All seven of the reported occurrences of ornate dalea in CNDDDB are north of the expansion area, with the closest being ± 3.5 miles to the northwest. The occurrences were in rocky clay flats with areas of vertisol clay soil. The Project site has potentially suitable habitat for ornate dalea, and there is potential for the species to be present.

Holmgren's Skullcap (*Scutellaria holmgreniorum*) – CRPR 3.3

Holmgren's skullcap is a perennial forb that occurs in Great Basin habitats in California and Nevada, where it can be found on volcanic clay soils at elevations between 1310 and 1735 meters. Holmgren's skullcap has been found to the north and west of the study area, and has a moderate to high potential to be present on the site. The taxon is closely related to the more widespread *Scutellaria nana*. Common-garden experiments suggest that the two taxa are not distinct; however, field observations have supported differentiation of the taxa. Given its taxonomic uncertainty, *S. holmgreniorum* was reassigned from CRPR 4.3 to CRPR 3.3 in February 2013.

Potential Effects to Special-Status Species and their Habitats

As documented above and in the BRA (Appendix E), the project could directly and indirectly affect special-status species, nesting birds and raptors, and habitats for these species. Potential effects are discussed below.

Direct Effects to Special-Status Birds and Nesting Birds

The project site has potentially suitable nesting habitat for northern harrier and burrowing owl, and potential foraging habitat for golden eagle, Swainson's hawk, long-eared owl, short-eared owl, and loggerhead shrike. Other bird species could also nest and forage in the Project site.

There is a potential for direct mortality or injury to birds to occur if nests are present in the expansion area during vegetation removal and ground-disturbing activities. Mitigation Measure 4.5-1 requires pre-construction surveys to be completed if ground-disturbing activities/vegetation removal occur during the nesting season. Mitigation Measure 4.5-1 acknowledges specific survey protocols and avoidance measures for the burrowing owl in accordance with CDFW requirements. Potential effects due to loss of nesting and foraging habitat are addressed below.

Direct Effects to Other Special-Status Wildlife Species

There is a potential for monarch butterflies, pygmy rabbits, white-tailed jackrabbits, and pallid bats to forage and/or breed in the project area. There is a potential for direct mortality or injury to these species if they are present in the expansion area during vegetation removal and ground-disturbing activities.

Mitigation Measure 4.5-2 requires that throughout the life of the mine, if milkweed, the host plant for monarch butterfly, is observed onsite during the breeding/pupae development season (generally May 16th to September 30th), the plant should be inspected for caterpillars. If developing

monarch caterpillars are present, the plant would need to be avoided until butterflies have emerged and the plant is no longer in use by the butterflies.

Mitigation Measure 4.5-3 requires that prior to new ground disturbance and annually thereafter, field surveys must be conducted to determine the presence of pygmy rabbits, white-tailed jackrabbits, and other special-status wildlife species that may be present onsite. If special-status animal species are identified within the expansion area, a qualified biologist, in consultation with CDFW, will recommend measures to avoid/minimize impacts.

Mitigation Measure 4.5-4 requires that a qualified biologist conduct pre-construction surveys in rock outcrops and other areas that could provide suitable roosting habitat for pallid bat. Additional measures are included in the event a maternity roost is detected.

Indirect Effects

Indirect effects are those that are caused by or will result from the proposed action and are expected to occur later in time. Effects could be both short- and/or long-term in nature. Material extraction and possible use of a portable crusher will result in increased noise in the expansion area as well as the surrounding areas. The increase in processing at the site will require increased use of the primary crusher (estimated 33 percent annual increase in use). The proposed Project will also extend the life of the mine to 2050, which will increase the duration of impacts from the existing mining operation. The proposed Project will result in an increase in human presence within the area for a 30-year period, which could potentially result in increased disturbance or stress to special-status and non-status wildlife species. Increased human presence, noise and vibration from equipment operation, and light within the Project area could result in displacement of wildlife from the site and surrounding areas for the duration of the proposed Project.

As described in Subsection 4.5.3, *Previous CEQA Review*, previously adopted mitigation measures and conditions of approval would apply to activities in the proposed quarry expansion area, including limiting mining activities from January 1st to March 31st each year, limiting activities during nighttime hours, and requiring lighting to be downward facing and fully shielded. These operating conditions will decrease the lighting and noise impacts within the expansion area and reduce the indirect impacts of the proposed Project.

Effects to Special-Status Plant Species

The Project site contains suitable habitat for ornate dalea, Holmgren's skullcap, and spiny milkwort. Although some botanical survey work has been conducted on and adjacent to the study area, there is a potential for these and/or other special-status plants to be present in the quarry expansion area, and additional survey is warranted.

Mitigation Measure 4.5-5 requires that prior to new ground disturbance and annually thereafter, a botanical survey must be conducted during the blooming season when special-status plants would be identifiable. If special-status plant species are identified within the quarry expansion area, measures included in Mitigation Measure 4.5-5 would be implemented to avoid or reduce impacts to the plant populations.

To further minimize/avoid the potential for direct effects on special-status species, Mitigation Measure 4.5-6 is included to require all personnel participating in earth-disturbing activities, and their supervisors, to receive training by a qualified biologist regarding special-status species and sensitive habits that could be present in the Project area.

Effects to Sagebrush Scrub Habitat

As described above, the project would result in the loss of 78.6 acres of sagebrush scrub habitat that provides suitable foraging and breeding habitat for numerous bird species and mammals. Potential effects on mule deer and pronghorn antelope are discussed under Impact 4.5-2 below.

Animal populations that utilize sagebrush shrub habitat would likely no longer utilize the site and surrounding sagebrush habitat. In order to minimize impacts due to the loss of wildlife habitat, Mitigation Measure 4.5-7 limits site disturbance in the expansion area to no more than two 5-acre increments while concurrently reclaiming the first 5-acre increment. After the initial excavation of two 5-acre increments, disturbance shall not exceed 5-acres at any given time and requires that reclamation of the quarry expansion area be completed concurrently with mining operations in accordance with the Reclamation Plan Amendment. Reclamation, including seeding, must commence within two years following completion of mining in each five-acre area in order to minimize the total area disturbed at any given time and to allow for restoration of the cover and food source for mammals concurrently with mining operations.

The Reclamation Plan Amendment includes a proposed plant palette and success standards for revegetation of the site, with the overall goal of returning the site to a condition similar to pre-mining conditions:

- Shrub and grass species will achieve 5 percent cover in year 1, 10 percent by year 2, and 18 percent in years 3 to 5. If survival drops below these numbers, plants will be replaced the following fall;
- Minimum species richness of at least two native perennial shrub species and one perennial grass species will be established in three years over the reclaimed expansion area;
- Average basal density of 3 perennial plants will be established within three years as quantified within 1-meter plots;
- Invasive exotic species will not compose greater than 10 percent of the cover in any year.

In order to ensure that the success standards are met, the Reclamation Plan Amendment requires an annual vegetation survey and monitoring report to be completed. The revegetation areas must be maintained in good condition through regular monitoring to detect problems before they affect the attainment of performance criteria.

In addition, Mitigation Measure 4.5-8 requires that remaining areas of the mine parcel remain undisturbed for the duration of mining in order to minimize the loss of foraging habitat in the area. This includes portions of Lassen County Assessor's Parcel Numbers (APN) 109-110-059 and 109-100-060. Based on the large regional expanse of suitable habitats in the area, the loss of sagebrush scrub habitat would be less than significant with implementation of Mitigation Measure 4.5-7 and Mitigation Measure 4.5-8.

Impact 4.5-2: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

The proposed Project is located within the CDFW-designated critical winter-range habitat for mule deer (see Figure 4-4) and winter-range habitat for pronghorn antelope (see Figure 4-5). The Project area falls within Deer Hunt Zone X5a, which is a zone within the greater Deer Assessment Unit (DAU) 2- Northeastern California. In 1996, the population for DAU 2 was estimated to be 25,000; in 2017, the estimated population was 29,289 (CDFG et al. 1998; CDFW 2017). More specific to the Project location, the mule deer population within Hunt Zone X5a has increased, with an estimated 544 animals in 2013 and 942 in 2017.

The Project is within Pronghorn Hunt Zone 4-Lassen. The population of pronghorn in northeastern California is not well studied. The estimated population size of pronghorn in northeastern California ranged between approximately 1,800 and 3,000 individuals for the period between 1956 and 1970 and then grew to almost 6,000 animals between 1971 and 1978, with the largest numbers of animals found in the Likely Table, Clear Lake and Lassen herds. By 1992, the population had grown to an estimated 8,000 animals before undergoing a decline of nearly 50 percent after the winter of 1992/1993. The population continued to decline over the next 10 years and has not been able to recover over the past 20 years (Hudgens et al., 2016).

A Deer Impact Analysis was conducted for the 1997 EIR. According to the analysis, the mule deer in the Project area are seasonal migrants that summer at higher elevations, probably on Shaffer Mountain, where fawns are born. Deer descend to lower elevations in fall and early winter, where they remain until spring. On the winter range, deer feed mainly on sagebrush and bitterbrush.

According to the East Lassen Deer Herd Plan prepared by the CDFW in 1982, the area around Shaffer Mountain is identified as “critical” winter range where deer are concentrated during severe winters. The location of the Project site at the southwest base of Shaffer Mountain is important because the snow melts rapidly in this area and produces the first green vegetation in late winter and early spring. This early “green-up” is particularly important to wintering deer by providing their first opportunity to reverse the pattern of winter malnutrition and caloric deficit.

Pronghorn antelope are less predictable in their seasonal movements than are mule deer. Pronghorn do not have a pronounced elevational change between summer and winter. However, many of the concerns regarding winter range and forage availability are similar for the two species.

Potential impacts to mule deer and antelope from the proposed quarry expansion include direct habitat loss and displacement due to human disturbance, as further described below.

Habitat Loss

As stated under Impact 4.5-1 above, the proposed quarry expansion includes spatial expansion of the existing mining boundary that would physically disturb and reduce an additional 78.6 acres of important winter habitat and important vegetation for mule deer and pronghorn antelope. As discussed in the Deer Impact Analysis prepared for the 1997 EIR, loss of vegetation would be non-significant with an appropriate reclamation plan including re-planting with bitterbrush, sagebrush, and native grasses, all from local sources, and protection from grazing and browsing

by both wildlife and livestock until the plants are well established, as well as monitoring to ensure compliance.

As required by Mitigation Measure 4.5-7, in order to minimize impacts from the loss of wildlife habitat, site disturbance in the expansion area is limited to no more than two 5-acre increments while concurrently reclaiming the first 5-acre increment. After the initial excavation of two 5-acre increments, disturbance shall not exceed 5-acres at any given time. Reclamation in the expansion area must be completed concurrently with mining operations in accordance with the adopted Reclamation Plan Amendment. Reclamation, including seeding must commence within two years following completion of mining in each five-acre area in order to minimize the total area disturbed at any given time and allow for restoration and seeding of the cover and food source concurrently with mining operations.

The Reclamation Plan Amendment includes a proposed plant palette and success standards for revegetation of the site, with the overall goal of returning the site to a condition similar to pre-mining conditions. The seed mix proposed for reclamation in the expansion area is similar to the seed mix approved by CDFW for the existing quarry. In addition, Mitigation Measure 4.5-8 requires that remaining areas of the mine parcel remain undisturbed for the duration of mining in order to minimize the loss of foraging habitat in the area. Impacts on deer and antelope related to temporary habitat loss will be less than significant with implementation of Mitigation Measure 4.5-7 and Mitigation Measure 4.5-8.

Displacement

Expansion of the mining area by an additional 78.6 acres will increase the area over which light and noise impacts will occur, causing additional displacement of mule deer and American pronghorn due to noise and human activity. As discussed in the 1997 Deer Impact Analysis, human activity in the Project area would displace animals escaping mid-winter snow as well as taking advantage of late-winter and early spring plant phenology or the spring green-up due to noise and activity at the site. The proposed Project will result in these impacts occurring over a larger area than the current mining operation and for a longer duration (until 2050).

The proposed Project will continue to comply with the conditions of approval for Use Permit Amendment No. 2018-003 limiting mining activities from January 1st to March 31st each year, limiting activities occurring during nighttime hours, and requiring lighting to be downward facing and fully-shielded. These operating conditions will decrease the lighting and noise impacts within the expansion area.

However, as discussed in previous CEQA review for the proposed Project, a seasonal closure from at least December through March was determined to be necessary to reduce the impacts due to displacement from noise and human activity to a less than significant level. The proposed Project will result in additional disturbance to pronghorn and mule deer. Human disturbance during a time of particular nutritional stress may effectively remove a portion of their winter range (Kucera, 1996). Because there are several hundred deer potentially affected and impacts will last for an additional 30 years (until 2050), this would be a significant environmental impact.

Adherence to the existing conditions of approval (Mitigation Measure 4.5-9 and Mitigation Measure 4.5-10) will reduce displacement impacts to American pronghorn and mule deer; however, this impact will remain significant and unavoidable.

The following mitigation measures are proposed for the significant Project impacts to special-status species as well as pronghorn and mule deer:

MM 4.5-1: To avoid impacts on burrowing owls and other nesting birds, including raptors protected under State and federal regulations, the following shall be implemented (removal of raptor nests at any time of year is prohibited unless appropriate permits are obtained).

- a. Burrowing owls. A qualified biologist shall conduct preconstruction surveys for burrowing owls in accordance with the *Staff Report on Burrowing Owl Mitigation* prepared by the California Department of Fish and Game (CDFW) (March 7, 2012). Upon completion, survey results shall be provided to Lassen County.

Where physical or visual access is available, survey coverage shall extend 500 feet around the project site where suitable habitat for burrowing owls is present. A minimum of four field surveys shall be conducted: at least one between February 15th and April 15th; and a minimum of three surveys, at least three weeks apart, between April 15th and July 15th, with at least one survey after June 15th. Survey methods and survey reports shall be in accordance with the CDFW Staff Report and be provided to Lassen County. If no active burrows are observed, the site shall be reinspected by a qualified biologist no more than one week prior to initiation of construction to ensure that owls are not present.

If an active burrow is observed in the project site, the County shall consult with CDFW regarding establishing a non-disturbance buffer around the burrow, or implementing passive relocation methods to exclude the owls from the site prior to commencement of construction. No burrowing owls shall be excluded from occupied burrows until a burrowing owl exclusion and relocation plan is approved by CDFW. Following owl exclusion and burrow demolition, the site shall be monitored by a qualified biologist to ensure burrowing owls do not reoccupy the site prior to construction.

In the event of loss of burrowing owl nests, a mitigation and monitoring plan shall be prepared by a qualified biologist to identify methods to offset the loss at a minimum 1:1 ratio (e.g., establishing a permanent conservation easement to provide for burrowing owl nesting, foraging, wintering, and dispersal, including completing habitat enhancements within the conservation easement area as necessary. The mitigation and monitoring plan shall be approved by CDFW prior to commencement of construction.

- b. For all other bird species, if vegetation removal or ground disturbance activities occur between February 1st and August 31st, a pre-construction nesting survey shall be conducted by a qualified biologist to identify active nests in and adjacent to the work area. Surveys shall begin prior to sunrise and continue until vegetation and nests have been sufficiently observed. The survey shall consider acoustic impacts and line-of-sight disturbances occurring as a result of the project in order to determine a sufficient survey radius to avoid nesting birds. At a minimum, the survey report shall include a description of the area surveyed, date and time of the survey, ambient conditions, bird species observed in the area, a description of any active nests observed, any evidence of breeding

behaviors (e.g., courtship, carrying nest materials or food, etc.), and a description of any outstanding conditions that may have impacted the survey results (e.g., weather conditions, excess noise, the presence of predators, etc.). The survey shall be conducted no more than one week prior to the initiation of construction and the survey report shall be provided to Lassen County. If construction activities are delayed or suspended for more than one week after the pre-construction survey, the site shall be resurveyed.

If active nests are found, appropriate actions shall be implemented to ensure compliance with the Migratory Bird Treaty Act and California Fish and Game Code. Compliance measures may include, but are not limited to, exclusion buffers, sound-attenuation measures, seasonal work closures based on the known biology and life history of the species identified in the survey, as well as ongoing monitoring by biologists.

- MM 4.5-2: Throughout the life of the mine, if milkweed (*Asclepias* spp.) is observed onsite during the breeding season/pupae development season (spring-summer) for the monarch butterfly, the plant shall be inspected for caterpillars by a qualified biologist. If developing monarch caterpillars are present, the plant shall be avoided until butterflies have emerged and the plant is no longer in use.
- MM 4.5-3: Prior to new ground disturbance and annually thereafter, a pre-construction survey shall be conducted by a qualified biologist to determine the presence of pygmy rabbits, white-tailed jackrabbits, and other special-status wildlife species that may be present onsite. Survey reports shall be provided to Lassen County. If special-status animal species are identified within the project site, a qualified biologist, in consultation with the California Department of Fish and Wildlife, shall recommend avoidance measures for protection of the species.
- MM 4.5-4: Prior to new ground disturbance, a qualified biologist shall conduct a survey in areas that contain rock outcrops or other potentially suitable roosting habitat for pallid bats. Survey reports shall be provided to Lassen County. If an active maternity roost is present, a qualified biologist, in consultation with the California Department of Fish and Wildlife, shall establish a suitable buffer zone to ensure that active bat nurseries are not adversely affected. If non-breeding bats are found in rock outcrops within the disturbance footprint, the individuals shall be safely evicted under the direction of a qualified biologist.
- MM 4.5-5: Prior to new ground disturbance and annually thereafter, a botanical survey shall be conducted during the blooming season when special-status plants known to occur in the region would be identifiable. Survey reports shall be provided to Lassen County. If special-status plants are present, a suitable buffer zone(s) shall be determined by a qualified biologist in consultation with the California Department of Fish and Wildlife (CDFW) and exclusionary fencing shall be placed prior to commencement of earth-disturbing activities.

If avoidance is not possible, CDFW shall be contacted to determine a satisfactory method of mitigation. Mitigation shall be undertaken concurrently with or in advance of the earth-disturbing activities.

- MM 4.5-6: All construction personnel participating in earth-disturbing activities and their supervisors shall receive training by a qualified biologist regarding protective measures for special-status plant and animal species and sensitive habitats that could exist in the study area. When new personnel are hired, proof that newly hired personnel have received mandatory training shall be provided to Lassen County before starting work. At a minimum, the training shall include the following:
- a. A review of the special-status species that could occur in the project site, the locations where the species could occur, the laws and regulations that protect these species, and the consequences of noncompliance with those laws and regulations.
 - b. Procedures to be implemented in the event that these species are encountered during construction.
 - c. A review of sensitive habitats that occur in the study area and the location of the sensitive habitats.
 - d. A review of applicable mitigation measures, standard construction measures, best management practices, and resource-agency permit conditions that apply to the protection of special-status species and sensitive habitats.
- MM 4.5-7: To minimize impacts from the loss of wildlife habitat, site disturbance in the expansion area shall not exceed two 5-acre increments while concurrently reclaiming the first 5-acre increment. After the initial excavation of two 5-acre increments, disturbance shall not exceed 5-acres at any given time. Reclamation in the expansion area shall be completed concurrently with mining operations in accordance with the adopted Reclamation Plan Amendment. Reclamation, including seeding, must commence within two years following completion of mining in each five-acre area in order to minimize the total area disturbed at any given time and to allow for restoration of the vegetative cover.
- MM 4.5-8: To ensure no additional foraging habitat loss, all remaining areas of the mine parcels shall remain undisturbed for the duration of mining. This includes the remaining portions of Lassen County Assessor's Parcel Number (APN) 109-100-059 and APN 109-100-060 (i.e., all portions of the parcels outside of the reclamation boundary for the current mine operation (as of 2021) and the proposed 2021 mine expansion boundary).
- MM 4.5-9: *Limits on Operation.* The operator shall continue limits on operations from January 1st to March 31st. Impacts can be lessened through continuing seasonal operating restrictions included in the Condition of Approval for Use Permit No. 96056: *Except in a state of emergency, as declared by the local Emergency Services Director and/or the Board of Supervisors and/or the City of Susanville, no grading, excavating, or blasting on the site shall be allowed between January 1st and March 31st annually.*
- MM 4.5-10: *Operating Conditions of Use Permit No. 2018-003.* The operator shall continue the Conditions of Approval for Use Permit Amendment No. 2018-003. Impacts can be lessened with the seasonal operating restrictions and light and noise reductions included in the Conditions of Approval for Use Permit Amendment No. 2018-003.

4.5.7 Level of Significance after Mitigation

Compliance with the operational conditions included in Subsection 4.5.3, *Previous CEQA Review*, and implementation of Mitigation Measure 4.5-1 through Mitigation Measure 4.5-8 ensures that the project's impacts to special-status species and their habitats are less than significant.

In order to mitigate potential impacts associated with displacement of mule deer and pronghorn antelope due to noise and human activity to a less than significant level, a seasonal closure from at least December through March of each year was determined to be necessary. The Lassen County Board of Supervisors has determined that economic losses from the four-month annual closure would impact the mine as well as the surrounding community; a disruption of mining operations would lead to a loss of employee payroll, place a higher demand on social services in the community, and reduce availability of mined materials in the surrounding area. An increased closure season of all operations onsite has been determined to be economically infeasible.

Adherence to the existing conditions of approval (refer to Mitigation Measure 4.5-9 and Mitigation Measure 4.5-10) will reduce displacement impacts to mule deer and pronghorn antelope; however, no additional mitigation measures are available, and this impact will remain significant and unavoidable.

4.6 Cultural and Tribal Cultural Resources

Expansion of the mining boundary to include an additional 78.6 acres is a substantial change that will require major revisions of the previous EIR due to the involvement of potentially new significant environmental effects pertaining to cultural resources and tribal cultural resources or a substantial increase in the severity of previously identified significant effects under CEQA Guidelines §15162.

Impacts to cultural resources for activities occurring within the currently permitted mine boundary were evaluated in three previous EIRs. The proposed Project would result in the expansion of the current mining operation to include an additional 78.6 acres. The expansion area has not been evaluated in previous EIRs.

This section provides a summary of the cultural resource setting of the Project site, previous CEQA review, cultural resource and tribal cultural resource regulations, and a discussion of the potential cultural resource and tribal cultural resource impacts of the proposed Project. The primary source of information in this section is derived from the *Archaeological Survey Report, Ward Mine Expansion Project* (ALTA, 2021).

Information contained in the *Archaeological Survey Report, Ward Mine Expansion Project*, related on the specific location of prehistoric and historic sites is confidential and exempt from the Freedom of Information Act (FOIA) and the California Public Records Act (CPRA); therefore, site specific cultural resource investigations are not included as an appendix to this environmental document. Professionally qualified individuals, as determined by the California Office of Historic Preservation, may contact the Lassen County Department of Planning and Building Services directly in order to inquire about its availability.

4.6.1 Environmental Setting

The Project area is situated on the west facing slopes of Shaffer Mountain within the Balls Canyon watershed. Elevations within the Project area range from about 4,190 to 4,560 feet above mean sea level (msl). No water sources are located nearby. During the historic-period the bottomlands of the Susanville River were converted extensively to agriculture and pasture. The foothill areas of the Project area were used for grazing cattle as evidenced by dirt roads, cattle trails, water reservoirs, and livestock fencing.

The Project area is situated at the southern end of the Modoc Plateau geologic province. The Modoc Plateau is a volcanic tableland that lies at the southern end of the Cascade Range of Mountains in Northeastern California. The Modoc Plateau constitutes the southernmost extension of a large volcanic plateau that formed about 25 million years ago and expands north into eastern Oregon, Eastern Washington, and Southern Idaho (Schoenheer, 1992:11). This tableland consists of block faulted Cenozoic basalt flows, smaller rhyolitic domes, shield volcanoes, lake basins, and river drainages.

The local vegetation community consists primarily of Great Basin Sage Brush (*Artemisia tridentata*), pinyon pine, and junipers (Schoenherr, 1992). Perennial bunch grasses including wheat grass (*Agropyron* spp.) and fescues (*Festuca* spp.) were noted within the Project area.

Prehistory

Over half a century of archaeological investigations in the Southern Cascade and Sierra Nevada has revealed a record of hunter-gatherer occupation spanning over 12,000 years (Baumhoff, 1957; Elsasser, 1960, 1978; Elston, 1971, 1982, 1986; Elston et al., 1977, 1994, 1995; Heizer and Elsasser, 1953; Moratto, 1984; Kowta, 1988; Prichard et al., 1966; Ritter, 1968, 1970; Olsen and Riddell, 1963). The cultural chronology of the Project area is best described as part of the overall cultural chronology for the Southern Cascade Range (Baumhoff, 1957; Delacorte, 1997; and Kowta, 1988).

The earliest documented evidence of occupation in the region began about 11,000 to 8,000 years BP, referred to as the Western Pluvial Lakes Tradition (Kowta, 1988). Early Holocene (+7,000 BP) archaeological sites tend to be situated along the margins of large pluvial lakes, indicating non-intensive or temporary occupation suggesting a nomadic settlement system with an emphasis on hunting of large terrestrial mammals and waterfowl. A diagnostic artifact of this time is the “crescent stone” that is associated with lacustrine adaptation and exploitation, possibly water fowling (Kowta, 1988).

During the Post-Mazama Period (7,000 to 5,000 BP) the climate shifted to warmer conditions giving way to a new adaptation known as the Great Basin Archaic Tradition, a lifeway that lasted well over 3,000 years. This period is characterized by a focus on seed processing (milling slabs and handstone) and big game hunting (atlatl), mostly at high elevation (Kowta, 1988). Diagnostic artifact types of this period include Northern Side-Notched and Pinto projectile points, which have been documented at Bucks Lake (Kowta, 1988). Northern Side-notched points may serve as an ethnic marker for a northern populations that was distinct from adjacent southern groups who relied on Gatecliff and other typically Great Basin projectile point types (Delacorte, 1997b:168-171; Layton, 1985; O’Connell, 1975).

The Early Archaic Period (ca. 5,000 to 3,500 years BP) show populations increased dramatically as suggested by the frequency of sites in conifer and oak woodland zones. This time period is known locally as the Martis Tradition, a wide-spread adaptation present along the western Sierra and Southern Cascade Range (Elston, 1971, 1979; Elston et al., 1977; Riddell and Pritchard, 1971; Johnson, 1980). A characteristic feature of this tradition is the prevalence of stone tools from locally available tool stone, primarily basalt (Kowta, 1988). Projectile points (contracting stem and corner notch) are found in high ratios to milling slabs and handstone, suggesting an emphasis on hunting. Gatecliff Split-stem and Humboldt Concave Base projectile points offer the primary diagnostic artifacts for this period (Delacorte et. al., 1997). Associated assemblage constituents include plentiful flake tools, bifacial knives, heavy core implements, and a wide array of ground stone milling tools.

The Middle Archaic Period (3,500 to 1,300 BP) demonstrates a florescence of sites and a dramatic increase in archaeological site visibility in the region. Extensive habitations, midden, grave lots, and house-structures tend to characterize this period indicating an increase in settlement size, duration of settlement, and increases in obsidian procurement and intensive biface reduction. Projectile points typical of this period include Martis series projectile points of the northern Sierra Nevada, and Elko Series projectile points of the Great Basin.

The Late Archaic Period (1,300 to 600 BP) is marked by major changes in land-use. The elaboration of archaeological assemblages noted in the Middle Archaic Period abruptly cease at approximately 1,000 BP as obsidian production falls off, archaeological visibility is lower, and cultural accumulations become more focused on specific subsistence pursuits. The beginning of the Late Archaic Period is marked in technological shifts associated with the advent of bow-and-arrow (Bettinger and Taylor, 1974; Delacorte et. al., 1997). The advent of bow-and-arrow technologies marks a shift to expedient flake-based tools and smaller residential settlements (Delacorte et. al., 1995, 1997). Rose Spring and Gunther Barb series are diagnostic of this period. Higher frequencies of milling equipment in Late Archaic assemblages suggest increased reliance on seed resources (Delacorte et. al., 1995), despite a diet breadth focused on both vegetal and animal resources (Basgall and McGuire, 1988). Flaked-stone assemblages reveal a shift from the highly curated and worked bifaces of ground stone accumulations dating to this period suggest a fundamental reorganization of settlement-subsistence adaptation focused on intensive exploitation of epos root and other plant resources (McGuire, 2000:30). This shift co-occurs with a dramatic fall off of obsidian biface production and increased use of local tool stone. These changes suggest a decreased foraging mobility and territoriality as indicated by semi-permanent lowland settlements with well-built house structures, cache pits, and other domestic facilities. In the Sierra Nevada intensified use of local plant resources is indicated by the introduction of shallow bedrock mortar and stone hullers (Elston et. al., 1994).

During the Terminal Prehistoric (600 BP-Historic-era) prehistoric components tend to be comparatively smaller, more ephemeral in nature, and usually represented by isolated ground stone concentrations or hearths with limited debris scatters. The Desert Side-notched and Cottonwood Triangular series are dominant projectile point types. Milling equipment tends to occur at higher ratios during these periods and is dominated by large, unshaped blocks with more ephemeral surface wear. Reduction trajectories for obsidian shift from biface reduction to a core/flake technology. The size and relative frequency of obsidian bifaces decrease. In general, this pattern has been interpreted as a response to increased territorial circumscription, which limited access to tool stone material sources, and increasing inter-group competition and conflict (McGuire 2000:32).

Ethnography

The Maidu inhabited the region of the Sierra Nevada foothills and Southern Cascades prior to Euro-American intrusion (Riddell, 1978:370-386). They are represented locally by the Mechoopda Band of Konkow Indians (Dixon, 1905). Primary sources of ethnographic information include Dixon (1905), Powers (1877), Kroeber (1925). In this section, the past tense is sometimes used when referring to native peoples because this is a historical study. This convention is not intended to suggest that Maidu people only existed in the past. To the contrary, many Maiduian groups have strong cultural and social identities today.

Linguistically, the Madiu are divided into three groups: the Northeastern, Northwestern and Southern. Maidu were never a single consolidated tribe, but instead were represented by numerous politically independent bands and tribelets. Each tribelet consisted of one or more villages and a number of camps with the tribelet's territory. The central village was usually the most populous and the residence of the community leader who served as the primary advisor and spokesman (Kroeber, 1925:397). Individual villages were autonomous and self-sufficient, not politically bound under any strict control of the community leader. The Maidu, like many neighboring groups,

followed a yearly gathering cycle traveling seasonally from winter villages on the river into the Sierra foothills to hunt and gather. They primarily subsisted on freshwater fish, acorns, and terrestrial game (Riddell, 1978:370-386). Any member of a community could procure food from the territory fishing, hunting, and gathering areas were held in common. Within the common lands certain families could claim fishing holes as their own and permission was required for other tribal members to use these areas (Dixon, 1905:224-227).

Local History

The Gold Rush (1848-9) brought a wave of immigrants to California. The Nobles Emigrant trail, a branch of the California Trail, was situated north of present day Susanville. Between 1841 and 1869, more than 200,000 emigrants traversed the California Trail. In 1854, Isaac Roop and Company built a trading post along the Nobles Emigrant trail. Susanville was named after Susan Roop, daughter of Isaac Roop. The area was originally called Rooptown, until 1857 when the present name was adopted (Purdy, 2005). The area's unique location, on the crest of the Sierra Nevada, and having dense timber and lush farmlands along the headwaters of the Susan River made the area an ideal location for settlement and the town quickly developed. Lassen County was officially recognized in 1864 with Susanville as the county seat. Fire was a persistent problem for the town. In 1893, the entire business district was leveled by fire and residents endured several more blazes until 1900, when the Susanville was incorporated as a means to provide fire protection. As a fire preventive measure the city passed a controversial ordinance in 1902 that prohibited the construction of wooden buildings in the town's business district. In 1913, the arrival of the Fernley & Lassen Railroad ushered in a new era of commerce that forever changed the community. The establishment of the lumber mills associated with the Lassen Lumber & Box Company and the Fruit Growers Supply Company provided an economic boom. The local economy declined as the lumber industry faded in the late 1950's and 1960's (Purdy, 2005). Susanville experienced an economic resurgence in 1963 when the California Correctional Facility Center was constructed.

Cultural Resources within Expansion Area

The *Archaeological Survey Report Ward Mine Expansion Project* (ALTA, 2021) was prepared to identify any archaeological, historical, or cultural resources located in the expansion area. The ASR included records search, historic map review, literature review, an archaeological field survey, and Native American communications.

The records search conducted at the Northeast Information Center of the California Office of Historic Resources Information System identified three previously identified historic-era or prehistoric cultural resources documented within the ¼ mile search radius of the expansion area. Historic maps of the Project site were also reviewed. A General Land Office Plat map dating to 1879 shows the Project area as unimproved land. A point labeled "House" on the 1879 GLO map was situated within the subject parcel in Section 19, adjacent (west) of the Project area. No historical maps were available for the 60-year period between 1893 and 1954. Topographic maps dating to 1954 through 1968 do not depict any infrastructure on the parcel. Available ethnographic literature was reviewed to identify cultural resources in the Project vicinity, and there are no ethnographic resources documented within 2 miles of the Project area.

The archaeological field survey identified two isolated finds and one cultural resource (ALTA_PRE-01) within the expansion area. Isolated finds are artifacts that occur as a single item and are not clearly associated with a cultural resource. Isolated finds do not merit formal recordation and are not considered cultural resources. Two isolated finds (1 prehistoric and 1 historic) were noted within the Project area. Table 4-15 provides a summary of isolated finds.

Table 4-15 SUMMARY OF CULTURAL RESOURCES		
Isolate Name	Description	Era
PRE-ISO-01	Metate fragment	Prehistoric
HIS-ISO-01	Solder dot/ beer cans (n-7)	Historic
Source: ALTA, 2021.		

The cultural resource identified within the expansion area (ALTA_PRE-01) is a prehistoric resource consisting of a sparse scatter of lithics including flake and tool fragment artifacts. The resource spans 48 m (southwest-northeast) by 64 m (northwest-southeast) and is situated adjacent (east) to a modern access road which forms the western boundary of the expansion area. The site may extend west outside of the expansion area. The resource area is located within a flat sagebrush dominated basin approximately 270 meters southeast of Balls Canyon Creek. No diagnostic artifacts were located. Mostly tool fragments were observed. One pecking stone and a likely grinding stone was noted at the site. Obsidian, chert, and metavolcanic flakes were present at a frequency of less than one artifact per square meter. Vegetation in the area consists of sage and various grasses, including native bunch grass.

Tribal Cultural Resources

Assembly Bill 52, which went into effect in July 2015, is an amendment to CEQA §5097.94 of the Public Resources Code. AB 52 established a proactive consultation process with all California Native American tribes identified by the Native American Heritage Commission (NAHC) with cultural ties to an area. This process is implemented on projects that file a notice of preparation for an EIR or notice of intent to adopt a negative or mitigated negative declaration. Under AB52, the Lead Agency is required to consult with tribes at tribal request. The bill further created a new class of resources under CEQA known as tribal cultural resources.

Non-AB 52 Consultation

ALTA archaeologist Kevin Dalton contacted the NAHC on March 27, 2020, to request a review of the Sacred Lands file for information on Native American cultural resources in the study area and to request a list of Native American contacts in this area. The NAHC replied on March 30, 2020, indicating that no Sacred Sites are known within the project area. The NAHC provided a list of Native American contacts that have knowledge or concerns about cultural resources in the project area. On April 9, 2020, letters were sent to all tribes listed by the NAHC. As of December 5, 2020, no response has been received from any of the groups consulted as part of this outreach effort. Follow up phone calls and messages were left with each tribe on April 15, 2020. No response has been received to date.

AB 52 Consultation

On April 28, 2021, the County initiated environmental review under CEQA for the proposed Project. The County sent a certified project notification letter to Darrel Cruz, Director of the Washoe Tribal Historic Preservation Office, a California Native American Tribe that is

traditionally and culturally affiliated with the geographic area of the proposed Project, on May 5, 2021, pursuant to PRC §21080.3.1, notifying that the Project was under review and to provide the Tribe 30 days from the receipt of the letter to request consultation on the proposed Project in writing. The letter included a brief description of the proposed Project, Project location, and a request for any information about tribal cultural resources in the Project area vicinity. No responses were received requesting initiation of consultation under the provisions of AB 52.

4.6.2 Regulatory Setting

The following is a description of State and local environmental laws and policies that are relevant to the CEQA review process for the proposed expansion area.

State

California Environmental Quality Act

Under CEQA, public agencies must consider the effects of their actions on both historical resources and unique archaeological resources. Pursuant to PRC §21084.1, a “project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.” Section 21083.2 requires agencies to determine whether proposed projects would have effects on unique archaeological resources.

“Historical resource” is a term with a defined statutory meaning (PRC §21084.1). Under CEQA Guidelines §15064.5(a), historical resources include the following:

- A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR (PRC §5024.1).
- A resource included in a local register of historical resources, as defined in PRC § 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC §5024.1(g), will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing in the California Register of Historical Resources (PRC §5024.1), including the following:
 - a) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
 - b) Is associated with the lives of persons important in our past;
 - c) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

- d) Has yielded, or may be likely to yield, information important in prehistory or history.

The fact that a resource is not listed in, or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to PRC §5020.1(k)), or identified in a historical resources survey (meeting the criteria in PRC §5024.1(g)) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC §§5020.1(j) or 5024.1.

Historical resources are usually 45 years old or older and must meet at least one of the criteria for listing in the CRHR, described above (such as association with historical events, important people, or architectural significance), in addition to maintaining a sufficient level of integrity.

Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be historical resources for purposes of CEQA unless a preponderance of evidence indicates otherwise (PRC §5024.1 and California Code of Regulations (CCR), Title 14, §4850). Unless a resource listed in a survey has been demolished, lost substantial integrity, or there is a preponderance of evidence indicating that it is otherwise not eligible for listing, a lead agency should consider the resource to be potentially eligible for the CRHR.

CEQA also requires lead agencies to determine if a proposed project would have a significant effect on unique archaeological resources. If a lead agency determines that an archaeological site is a historical resource, the provisions of PRC §21084.1 and CEQA Guidelines §15064.5 would apply. If an archaeological site does not meet the CEQA Guidelines criteria for a historical resource, then the site may meet the threshold of PRC §21083.2 regarding unique archaeological resources. A unique archaeological resource is an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria.

“Unique archaeological resource” means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.”

The CEQA Guidelines note that if a resource is neither a unique archaeological resource nor a historical resource, the effects of the project on that resource shall not be considered a significant effect on the environment (14 CCR §15064[c][4]).

If the project would result in a significant impact to a historical resource or unique archaeological resource, treatment options under PRC §21083.2 include activities that preserve such resources in

place in an undisturbed state. Other acceptable methods of mitigation under §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).

Section 7050.5(b) of the California Health and Safety Code specifies protocol when human remains are discovered, as follows:

“In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code.”

CEQA §15064.5(e) requires that excavation activities stop 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 Native American Heritage Commission (NAHC) must be contacted within 24 hours. At that time, 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.

In addition to the mitigation provisions pertaining to accidental discovery of human remains, the CEQA Guidelines also require that a lead agency make provisions for the accidental discovery of historical or archaeological resources, generally. Pursuant to §15064.5(f), these provisions should include “an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding, and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place.”

California Native American Heritage Commission

The NAHC is the primary State agency responsible for identifying and cataloging Native American cultural resources. It works to prevent irreparable damage to designated sacred sites and interference with expressions of Native American human remains found outside of a dedicated cemetery, who can then make recommendations on the treatment and disposition of the remains. The NAHC is also responsible for mediating disputes that may arise during the disposition of any remains. The guidelines also establish the NAHC to identify the most likely descendent of any remains and to mediate disputes regarding the disposition.

California Public Resources Code

The California PRC, §5097.5, prohibits the excavation or removal of any “vertebrate paleontological site, or any other archaeological, paleontological, or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction of such

lands.” Public lands are defined as lands owned by or under the jurisdiction of the State, or any city, county, district, authority, or public corporation. Any unauthorized disturbance or removal of archaeological, historic, or paleontological materials or sites located on public lands is considered a misdemeanor.

California Health and Safety Code

Section 7050.5 of the Health and Safety Code makes it a misdemeanor to intentionally disturb, mutilate, or remove interred human remains. It also requires that if human remains are discovered outside of a dedicated cemetery, any excavation or disturbance of the site stop until the county coroner makes a report. Under this section, if the county coroner determines the remains to be Native American, the coroner must contact the NAHC within 24 hours. Additionally, §7050.5 of the California Health and Safety Code, §5097.98 of the California PRC, §15064.5(d) of the CEQA Guidelines outlines the procedures to be used if Native American human remains are unexpectedly found on non-federal land. The guidelines protect the remains from accidental or deliberate destruction or disturbance, and establish procedures to appropriately and sensitively address such a discovery.

California Public Records Act

Section 6253 and 6254.10 of the California Code authorize State agencies to exclude archaeological site information from public disclosure under the CPRA. In addition, the CPRA (Government Code §6250 et seq.) and California’s open meeting law (The Brown Act, Government Code §56950 et seq.) protect the confidentiality of Native American cultural place information. The CPRA (as amended, 2005) contains two exemptions that aid in the protection of records relating to Native American cultural places by permitting any State or local agency to deny a CPRA request and withhold from public disclosure:

- Records of Native American graves, cemeteries, and sacred places and records of Native American places, features, and objects described in §5097.9 and §5097.993 of the Public Resources Code maintained by, or in the possession of, the Native American Heritage Commission, another state agency, or local agency (GC §6254(r)); and
- Records that relate to archaeological site information and reports maintained by, or in the possession of, the Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, another state agency, or local agency, including the records that the agency obtains through a consultation process between a California Native American tribe and a state or local agency (GC §6254.10).

Likewise, the Information Centers of the CHRIS maintained by the OHP prohibit public dissemination of records search and site location information. In compliance with these requirements, and those of the Code of Ethics for the Society of California Archaeology and the Register of Professional Archaeologists, the locations of cultural resources are considered restricted information with high restricted distribution and are not publicly accessible.

Assembly Bill 52

In September of 2014, the California Legislature passed AB 52, which added provisions to the PRC regarding the evaluation of impacts on tribal cultural resources under CEQA, and consultation requirements with California Native American tribes. In particular, AB 52 now requires lead agencies to analyze project impacts on “tribal cultural resources” separately from

archaeological resources (PRC §21074; §21083.09). The Bill defines “tribal cultural resources” in a new section of the PRC §21074. AB 52 also requires lead agencies to engage in additional consultation procedures with respect to California Native American tribes (PRC §21080.3.1, §21080.3.2, §21082.3). Specifically, PRC §21084.3 states:

- a) *Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.*
- b) *If the lead agency determines that a project may cause a substantial adverse change to a tribal cultural resource, and measures are not otherwise identified in the consultation process provided in Section 21080.3.2, the following are examples of mitigation measures that, if feasible, may be considered to avoid or minimize the significant adverse impacts:*
 - 1) *Avoidance and preservation of the resources in place, including, but not limited to, planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.*
 - 2) *Treating the resource with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:*
 - a) *Protecting the cultural character and integrity of the resource.*
 - b) *Protecting the traditional use of the resource.*
 - c) *Protecting the confidentiality of the resource.*
 - 3) *Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.*
 - 4) *Protecting the resource.*

AB 52 required the Office of Planning and Research to update Appendix G of the CEQA Guidelines to provide sample questions regarding impacts on tribal cultural resources (PRC §21083.09).

Local

Standish-Litchfield Area Plan

The *Standish-Litchfield Area Plan* contains the following policy related to cultural resources:

- Policy 12-A: The County shall within its authority, preserve and protect the cultural resources of the Planning Area.

4.6.3 Previous CEQA Reviews

Previous CEQA review of cultural resources completed for the existing mining area at the project site are summarized below. The 1981 and 1997 EIRs prepared for the existing operation did not contain an analysis of tribal cultural resources as this resource was not previously required and was added to the CEQA Guidelines in 2016.

1981 EIR

An archaeological reconnaissance and evaluation of the Project area included within the present project boundary was conducted by Trygve Sletteland of Eco, Redding, and was included with the 1981 EIR. No new historical sites were discovered during the survey; however, reference was made to two known sites which are approximately one mile from the project. The archaeologist recommended that the applicants “proposed land use be given archaeology clearance since no cultural resources were identified during an archaeological survey of their project area. A review of the Register of Historic Places revealed no known historic places within the project area. The State Parks and Recreation Booklet “California Historical Landmarks”, was also reviewed and showed no landmarks within the site. In response to an inquiry addressed to the Lassen County Historical Society, a letter was received indicated no known sources of cultural importance present. A letter was also addressed to Susanville Indian Rancheria requesting any information regarding possible cultural resources located in the project area to which no reply was received. If anything of importance, historically or archaeologically should be discovered in the course of set-up, operation, excavation, or processing of materials (should the project be approved), the proper authorities would be notified.

1997 EIR

The 1996 Initial Environmental Study concluded that impacts to cultural resources on the site or in the surrounding area would be less than significant, supported by the 1980 Sletteland study as well as the July 22, 1996 letter from the Northeastern Center of the California Historical Resources Information Center which agreed with the report’s conclusion. The Information Center did not call for work stoppage if any cultural resources are uncovered during operations. Project impacts and cumulative impacts were determined to be less than significant. The following mitigation measure was included in the EIR to ensure that impacts to the uncovering of resources will not result in significant impacts by requiring their protection:

“Work stop if cultural resources uncovered. If cultural resources or human remains are uncovered during site operations, work shall stop immediately. The Lassen County Community Development Department shall be contacted and a qualified archaeologist shall be called in to assess the resources and recommend appropriate mitigation which shall be implemented prior to additional work.”

2019 EIR

The Initial Study prepared for the 2019 EIR determined that 24-hour operations, increase in production during emergencies, and extension of the life of the mine would result in no impacts to cultural resources. The 2019 project did not include a change to the location or type of mining or total site production. The existing permitted location and type of mining were analyzed under the previous EIRs prepared for the operation. The project was determined to have no impact to cultural resources and cultural resource impacts were not further evaluated in the 2019 EIR.

4.6.4 Thresholds of Significance

Following PRC §§ 21083.2 and 21084.1, and § 15064.5 and Appendix G of the CEQA Guidelines, historical resource impacts are considered to be significant if the project would result in a positive response to any of the following questions:

- *Would the project cause a substantial adverse change in the significance of a Historical Resource pursuant to CEQA Guidelines Section 15064.5?*
- *Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?*
- *Would the project disturb any human remains, including those interred outside of dedicated cemeteries?*

CEQA Guidelines §15064.5 defines substantial adverse change as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource is materially impaired. CEQA Guidelines §15064.5(b)(2) defines materially impaired for purposes of the definition of substantial adverse change as follows:

The significance of an historical resource is materially impaired when a project:

- a) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or
- b) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to §5020.1(k) of the PRC or its identification in an historical resources survey meeting the requirements of §5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- c) Demolishes or materially alters in an adverse manner those physical characteristics of a Historical Resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

CEQA requires that if a project would result in an effect that may cause a substantial adverse change in the significance of a historical resource or would cause significant effects on a unique archaeological resource, then alternative plans or mitigation measures must be considered. Therefore, prior to assessing effects or developing mitigation measures, the significance of cultural resources must first be determined. The steps that are normally taken in a cultural resources investigation for CEQA compliance are as follows:

- Identify potential historical resources and unique archaeological resources;
- Evaluate the significance of the potential historical resources; and
- Evaluate the effects of the project on eligible (significant) historical resources and unique archaeological resources.

The following significance thresholds related to tribal cultural resources have been derived from PRC §21084.2:

- *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, or cultural landscape that is geographically*

defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- *Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).*
- *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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*

AB 52 established that a substantial adverse change to a tribal cultural resource has a significant effect on the environment. In assessing substantial adverse change, Lassen County must determine whether or not the project will adversely affect the qualities of the resource that convey its significance. The qualities are expressed through integrity. Integrity of a resource is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association [California Code of Regulations [CCR] Title 14, §4852(c)].

Impacts are significant if the resource is demolished or destroyed or if the characteristics that made the resource eligible are materially impaired [CCR Title 14, §15064.5(a)]. Accordingly, impacts to a tribal cultural resource would likely be significant if the project negatively affects the qualities of integrity that made it significant in the first place. In making this determination, Lassen County need only address the aspects of integrity that are important to the significance of tribal cultural resources.

4.6.5 Impact Analysis

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

Project Impacts

Impact 4.6-1: The Project would cause a substantial adverse change in the significance of a historical or archaeological resource pursuant to §15064.5.

Significant cultural resources, as buildings, sites, structures, objects, and districts significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, must meet the criteria described in Subsection 4.6.2, *Regulatory Setting*, above. If no eligible resources are identified within the project area, then the subject project is not considered to have a significant impact on cultural resources. In addition, State regulations require that measures be taken to protect any resources that are uncovered during construction, and compliance with CEQA Guidelines §15064.5(f) requires that construction activities halt if potentially significant resources are discovered until the resources can be assessed by a qualified person.

The proposed Project could potentially result in a significant impact if it caused a substantial adverse change in the significance of an archaeological resource. The archaeological field survey identified one cultural resource within the expansion area and two isolated finds. Isolated finds do not merit formal recordation and are not considered cultural resources. The cultural resource identified within the expansion area is a prehistoric resource consisting of sparse scatter of lithics including flake and tool fragment artifacts. This resource is considered potentially eligible for the CRHR.

Mining activities within the expansion area could result in a substantial adverse change to the cultural resource identified within the expansion area (ALTA_PRE-01), resulting in a significant impact. In addition, mining in the expansion area could result in the adverse change in the significance of currently undiscovered cultural or archaeological resources, resulting in a significant impact. To minimize potential impacts to prehistoric and historic resources Mitigation Measure 4.6-1 and Mitigation Measure 4.6-2 are required. With implementation Mitigation Measure 4.6-1 and Mitigation Measure 4.6-2, impacts to cultural resources would be less than significant.

Impact 4.6-2: The Project would disturb human remains, including those interred outside of formal cemeteries.

Buried human remains could be inadvertently unearthed during excavation activities, which could result in damage to these human remains. The project would comply with to California Health and Safety Code §7050.5 and §5097.98 of the PRC (as amended by Assembly Bill 2641) should human remains be encountered. Pursuant to the codes, all work in the immediate vicinity of the burial must cease, and any necessary steps to ensure the integrity of the immediate area must be taken, as required by Mitigation Measure 4.6-3. Impacts would therefore be less than significant.

Impact 4.6-3: Cause a substantial adverse change in the significance of a tribal cultural resource.

ALTA archaeologist Kevin Dalton contacted the NAHC on March 27, 2020, to request a review of the Sacred Lands file for information on Native American cultural resources in the study area and to request a list of Native American contacts in this area. The NAHC replied on March 30, 2020, indicating that no Sacred Sites are known within the project area. The NAHC provided a list of Native American contacts that have knowledge or concerns about cultural resources in the Project area. On April 9, 2020, letters were sent to all tribes listed by the NAHC. To date, no response has been received from any of the groups consulted as part of this outreach effort.

Pursuant to PRC §21080.3.1, on May 5, 2021 the County notified the Washoe Tribe, a California Native American Tribe that is traditionally and culturally affiliated with the geographic area, that the Project was under review. No responses were received requesting initiation of consultation under the provisions of AB 52.

No tribal cultural resources were identified within or immediately adjacent to the project area and, therefore, the proposed Project would not result in a significant impact to known TCRs. Impacts to unknown tribal cultural resources that may be discovered during Project construction would be less than significant with the incorporation of Mitigation Measure 4.6-1 through 4.6-3.

4.6.6 Mitigation Measures

The following mitigation measures would reduce potential impacts to less than significant levels:

MM 4.6-1: Prior to ground disturbing activities with the expansion area, a non-disturbance area for WARD-PRE-01 shall be defined and marked by a qualified archaeologist. Once the non-disturbance area is delineated, one the following options shall be implemented by the project proponent:

- *Resource Avoidance.* The project shall be redesigned to avoid all ground disturbances within the established non-disturbance area and long-term access restrictions shall be established (fencing or deed restrictions) to preclude disturbance to the resource.
- *Evaluation and Data Recovery.* WARD-PRE-01 shall be evaluated for eligibility for inclusion in the CRHR by a qualified archaeologist. The results of the evaluation shall be submitted to Lassen County. If the evaluation is negative (i.e., not historically significant), no further mitigation is required. If the property is found to be an historical resource and data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provisions for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaking. The study shall be deposited with the California Historical Resources' Regional Information Center.

MM 4.6-2: *Inadvertent Discovery of Cultural Resources.* If subsurface deposits believed to be cultural or human in origin are discovered during construction, then all work must halt within a 50-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. If the professional archaeologist determines that the find does not represent a cultural resource, then work may resume immediately, and no agency notifications are required. If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, then he or she shall immediately notify the County, which shall consult on a finding of eligibility and implement appropriate treatment measures, if the find is determined to be eligible for inclusion in the NRHP or CRHR. Work cannot resume within the no-work radius until the County, through consultation as appropriate, determines that the site either: 1) is not eligible for the NRHP or CRHR; or 2) that the treatment measures have been completed to its satisfaction.

MM 4.6-3: *Unanticipated Discovery of Human Remains.* In the event of the discovery of human remains, or remains that are potentially human, the contractor shall ensure reasonable protection measures are taken to protect the discovery from disturbance (Assembly Bill [AB] 2641). The archaeologist shall notify the Lassen County Coroner (as per §7050.5 of the Health and Safety Code). The provisions of §7050.5 of the California Health and Safety Code, §5097.98 of the California PRC, and AB 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the project

(§5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, then the NAHC can mediate (§5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work cannot resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

4.6.7 Level of Significance after Mitigation

Less than significant impact with mitigation incorporated.

4.7 Energy

This section of the DSEIR describes the existing energy consumption at the Project site, includes a summary of applicable energy regulations, a summary of the previous CEQA review of energy impacts of operations at the Project site, and evaluates the potential impacts that could occur as a result of the proposed expansion related to energy.

Expansion of the mining boundary of the current mining operation to include an additional 78.6 acres, increasing annual production from 100,000 to 200,000 tons per year and increasing the life of the mine to 2050 are substantial changes proposed in the Project that will require major revisions of the previous EIR due to the involvement of potentially new significant environmental effects pertaining to energy resources or lead to a substantial increase in the severity of previously identified significant effects under CEQA Guidelines §15162.

4.7.1 Environmental Setting

State of California

Transportation accounted for nearly 39.3 percent of California's total energy consumption in 2019 (US EIA, 2021). In 2019, California consumed 15.4 billion gallons of gasoline and 3.1 billion gallons of diesel fuel (BOE, 2020). Petroleum-based fuels currently account for more than 90 percent of California's transportation fuel use. However, the State is now developing strategies to reduce petroleum use. Over the last decade, California has implemented several policies, rules, and regulations to improve vehicle efficiency, increase the development and use of alternative fuels, reduce air pollutants and greenhouse gases (GHGs) from the transportation sector, and reduce vehicle miles travelled. The California Energy Commission (CEC) has also developed plans and policies to expand the infrastructure of alternative fuel refueling stations to encourage the use and reliability of alternatively fueled vehicles.

Electricity is quantified using kilowatts (kW) and kilowatt-hour (kWh). A kW is a measure of 1,000 watts of electrical power and a kWh is a measure of electrical energy equivalent to a power consumption of 1,000 watts for 1 hour. The kWh is commonly used as a billing unit for energy delivered to consumers by electric utilities. Electricity and natural gas in California are generally consumed by stationary users such as residences and commercial and industrial facilities, whereas petroleum consumption is generally accounted for by transportation-related energy use. Californians consumed 29,510 gigawatt hours (GWh) of electricity in 2020 (CEC, 2021). Natural gas energy usage is typically quantified using the British Thermal Unit (Btu). Total natural gas usage in California was approximately 1.23 trillion Btu's in 2020.

Lassen County

Retail and non-retail diesel fuel consumption in Lassen County for 2019 was approximately 2,040,000 gallons (CEC, 2021).

The electricity consumption attributable to non-residential land uses in Lassen County from 2016 to 2020 is shown in Table 4-16, *Non-Residential Electricity Consumption in Lassen County 2016-2020*. As indicated, the demand has remained relatively constant, with no substantial increase, even as the population has increased.

<p>Table 4-16 NON-RESIDENTIAL ELECTRICITY CONSUMPTION IN LASSEN COUNTY 2016-2020</p>	
Year	Nonresidential Electricity Consumption (in millions of kilowatt hours)
2016	322.4977
2017	283.5326
2018	274.4072
2019	264.0367
2020	265.2748
<p>Source: California Energy Consumption Data Management System. <i>Electricity and Natural Gas Consumption by County</i>. [Online]: http://ecdms.energy.ca.gov/. Accessed: November 5, 2021.</p>	

The natural gas consumption attributable to nonresidential land uses in Lassen County from 2016 to 2020 is shown in Table 4-17, *Non-Residential Natural Gas Consumption in Lassen County 2016-2020*. Similar to electricity consumption, the demand has remained relatively constant, with no substantial increase, even with an increase in population.

<p>Table 4-17 NON-RESIDENTIAL NATURAL GAS CONSUMPTION IN LASSEN COUNTY 2016-2020</p>	
Year	Nonresidential Natural Gas Consumption (in million British Thermal Units)
2016	1,083,104
2017	1,147,145
2018	1,092,882
2019	1,122,411
2020	1,112,566
<p>Source: California Energy Consumption Data Management System. <i>Electricity and Natural Gas Consumption by County</i>. [Online]: http://ecdms.energy.ca.gov/. Accessed: November 5, 2021.</p>	

Current Mine Operations

Electrical service to the existing quarry is provided by Plumas Sierra Rural Electric Cooperative (PSREC). The energy resources providing the majority of power for the PSREC include large hydroelectric (30.3%), natural gas (25.4%), and unspecified power (39.6%). Unspecified power is electricity that has been purchased through open market transactions and is not traceable to a specific generation source. Renewable resources including geothermal and eligible hydroelectric make up 4.6 % of the power mix (PSREC, 2020). Annual electricity demand of the quarry (based on records from September 2020 to August 2021) is approximately 490,000 kilowatt-hours (kWh). Onsite energy demand is limited to electricity and diesel fuels. Electricity is used to power the asphalt plant, lime plant, and concrete plant.

Diesel fuel is used to operate mobile equipment as well as generators used to run the crushing plant, portable plant, and wash plant. Off-road equipment used at the current operation includes four off-highway trucks (376 horsepower) that operate on average 350 hours per year, two excavators (337 horsepower) that operate 450 hours per year, five front-end loaders (84 horsepower) that operate 480 hours per year, and one dozer (365 horsepower) operating 500 hours per year to move materials. The existing operation is estimated to require 385,520 gallons of diesel fuel per year (RCH Group, 2021).

The existing operation also requires the use of diesel fuel for material haul trucks and gasoline or diesel fuel for delivery and employee trips. The mine generates a maximum of 40 employee trips per day and 10 supplier truck trips each day. The material haul truck trips for the operation area limited by Condition of Approval # 8 of the existing use permit. The condition limits the number of haul trucks associated with the mining operation to a daily average of 26 round trips (26 arriving and 26 departing) throughout the calendar year with a daily maximum of 275 round trips (275 arriving and 275 departing). The number of haul trips would not change with implementation of the proposed Project.

4.7.2 Regulatory Setting

The following is a description of State and local environmental laws and policies that are relevant to the CEQA review process for the proposed expansion area.

State

Public Resources Code (PRC) §21100(b)(3) and CEQA Guidelines §15126.4 require EIRs to describe, where relevant, the wasteful, inefficient, and unnecessary consumption of energy caused by a project. In 1975, largely in response to the oil crisis of the 1970s, the California legislature adopted Assembly Bill (AB) 1575, which created the California Energy Commission (CEC). The statutory mission of the CEC is to forecast future energy needs, license thermal power plants of 50 megawatts or larger, develop energy technologies and renewable energy resources, plan for and direct state responses to energy emergencies, and – perhaps most importantly – promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended PRC §21100(b)(3) to require EIRs to consider the wasteful, inefficient, and unnecessary consumption of energy caused by a project.

California's Energy Efficiency Standards for Residential and Non-Residential Buildings

Title 24, California's energy efficiency standards for residential and non-residential buildings, was established by the CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption, and provide energy efficiency standards for residential and non-residential buildings. California's energy efficiency standards are updated on an approximate three-year cycle. On January 1, 2020, the 2019 Title 24 standards became effective with more stringent requirements. The 2019 standards are expected to substantially reduce the growth in electricity and natural gas use. Additional savings result from the application of the standards on building alterations. For example, requirements for cool roofs, lighting, and air distribution ducts are expected to save additional electricity. These savings are cumulative, doubling as years go by.

California Green Building Standards

The California Green Building Standards Code (California CCR, Title 24, Part 11), commonly referred to as the CAL Green Code, is a statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the California Department of Housing and Community Development. The CAL Green standards require new residential and commercial buildings to comply with mandatory measures under the topics of planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. CAL Green also provides voluntary tiers and measures that local governments may adopt which encourage or require additional measures in

the five green building topics. The most recent update to the CAL Green Code was adopted in 2019 and went into effect January 1, 2020.

Local

Lassen County General Plan

The *Lassen County General Plan* contains the following goals, policies and implementation measures related to energy resources:

GOAL N-17: Conservative management of Lassen County's energy resources so that those resources can be developed and utilized for benefit of County residents with high degree of efficiency and productivity.

- Policy NR-6: The County advocates, and encourages Federal and state agencies to conduct to or help fund resource assessments and other studies to evaluate the availability of energy resources, and to facilitate efficient and well-designed projects which can capitalize on those resources with acceptable levels of environmental impact and compatibility with other land uses and resource values.
- Policy NR-62: In the course of adopting policies pertaining to energy resources in other County planning elements and area plans, the County may consider additional and more specific policies and measures to manage those resources.
- Policy NR-63: The Energy Element of the Lassen County General Plan shall provide specific policies and measures pertaining to the conservation and management of energy resources, as well as the siting and development standards of projects proposing to utilize those resources.

4.7.3 Previous CEQA Reviews

2019 EIR

Energy consumption was not directly reviewed in the previous 1981 and 1997 EIR documents. The 2019 EIR included an analysis of the energy impacts of existing operation. As described in the 2019 EIR, some project work was transferred from daytime to nighttime use and there was a slight increase in generator fuel consumption for nighttime lighting. The fuel consumption increase was for a very small duration of 2 to 4 times per year and did not result in any long term operational fuel consumption. The extension of the project resulted in a continued fuel use for vehicles and for generators. However, this results in fewer vehicle trips for local construction Projects. New trucks were purchased by Hat Creek Construction & Materials, Inc., to meet the new emission guidelines. Hat Creek also made improvements of adding reclaimed asphalt pavement (RAP) to the mixes of asphalt to be more energy and resource efficient. It was determined that there were no negative impacts on local or regional energy supplies from this project. There was an overall decrease in energy demand due to the decrease in miles from the local of final use. The project met compliance with local energy standards. The project uses diesel for onsite fuel and there is no transportation alternative for product delivery and energy usage is not expected to increase at any time. The Planning Commission found impacts related to energy consumption and cumulative impacts to energy consumption to be less than significant.

4.7.4 Thresholds of Significance

In accordance with CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the project. According to Public Resources Code §21100(b)(3) and Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact related to *Energy*, if it would:

- *Result in wasteful, inefficient, and unnecessary consumption of energy resources during project construction or operations.*
- *Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.*

4.7.5 Impact Analysis

The increase in annual production of the mine (from 100,000 to 200,000) tons per year will increase the energy use of the existing operation. The increase in production will require increased equipment use. In addition, the proposed Project will extend the life of the mine an additional 20 years, requiring energy consumption for a longer period of time. At the end of the life of the mine, the mining area will be reclaimed, and the energy requirements will cease.

The proposed Project will result in an increase in crushing operations as well as an increase in annual hours of operation for off-road equipment to support the increase in annual production. The annual operating hours for the majority of the off-road equipment will increase by 50 percent. On average, the loaders will operate 1,200 hours per year, the excavators will operate 675 hours per year, onsite haul trucks will operate 525 hours per year and the dozer will operate 750 hour per year. Operation of the primary crusher, currently powered by diesel generators, will increase approximately 33 percent on an annual basis to produce the increased aggregate volume.

Increased equipment use will result in an increase in diesel fuel consumption. Current operations require an estimated 385,520 gallons of diesel fuel each year. Assuming equipment will continue to be operated by generators, the proposed Project will require an additional 41,027 gallons of diesel fuel each year (RCH Group, 2021). The diesel fuel required by the proposed Project will decrease as generators are removed or replaced with Tier 4 (most efficient) generators. The quarry currently uses four diesel generators with the following upgrades or replacements planned:

- One 750 hp diesel generator associated with the aggregate plant, which will be switched to line power by January of 2022.
- One 755 hp diesel generator associated with the aggregate plant, which will be updated with Air District approved Tier 4 engine or switched to line power by January of 2023.
- One 475 hp diesel generator associated with the lime plant, which will be updated with Air District approved Tier 4 engine or switched to line power by January of 2024.

One 470 hp diesel generator associated with the wash plant, which will be updated with Lassen County APCD approved Tier 4 engine or switched to line power by January of 2025. The proposed Project will not result in an increase in material haul truck trips, therefore the transportation energy

requirements will not increase above existing conditions. Hat Creek Construction & Materials, Inc., fleet is in a change-out period for trucks and has upgraded to more energy efficient vehicles and has a scheduled goal of phasing out and replacing generator engines that operate the plant facilities with new and more energy efficient engines by 2025. One of the generators associated with the aggregate plant will be switched to line power by January 2022 and additional equipment will be connected to line power as feasible depending on power availability at the Project site.

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

Project Impacts

Impact 4.7-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

The proposed Project will increase the annual energy requirements for mining operations and extend the energy needs of the Project for an additional 20 years. Similar to existing conditions, the proposed quarry expansion would consume energy the fuel consumed by off-road vehicles and equipment. The increase in energy will be proportionate to the increased volume of material produced from the mine. Electrical consumption would be similar to the existing mine operations and would not require an increased demand compared to existing conditions.

Fossil fuels used for off-road vehicles and other energy-consuming equipment would be used during mine operations. Fuel energy consumed during construction would be limited to an additional 20 years would not represent a significant demand on energy resources.

As discussed in Section 4.4, *Air Quality*, the proposed Project includes mitigation measures that would require implementation of measures to reduce air pollutant emissions. These reduction measures would include or result in increased energy efficiency when feasible. Implementation of energy conservation measures would also serve to increase the Project's overall energy conservation and reduce energy consumption.

Project equipment would also be required to comply with the latest U.S. Environmental Protection Agency (EPA) and California Air Resources Board (CARB) engine emissions standards. These emissions standards require highly efficient combustion systems that maximize fuel efficiency and reduce unnecessary fuel consumption. The mine operator is in the process of making improvements to the mixes of asphalt to be more energy and resource efficient, such as using recycle concrete and asphalt materials when producing new asphalt mixes. In addition, the operator's existing truck fleet is in a change-out period to more energy efficient vehicles and has a scheduled goal of phasing out and replacing generators with new and more energy efficient engines by 2025. Due to increasing transportation costs and fuel prices, the mine operator has a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during the life of the mine.

The proposed Project will result in an increase in crushing operations as well as an increase in annual hours of operation for off-road equipment to support the increase in annual production. The annual operating hours for the majority of the off-road equipment will increase by 50 percent. On average, the loaders will operate 1,200 hours per year, the excavators will operate 675 hours per year, onsite haul trucks will operate 525 hours per year and the dozer will operate 750 hour per year.

Increased equipment use will result in an increase in diesel fuel consumption. Current operations require an estimated 385,520 gallons of diesel fuel each year. The proposed Project's diesel fuel consumption is estimated to be 41,027 gallons, which would increase fuel use in the County by two percent. A two percent increase in county-wide diesel fuel consumption is not anticipated to trigger the need for additional capacity.

The proposed 78.6-acre quarry expansion does not include an increase in truck or employee traffic trips beyond existing conditions. It should be noted that, given the diverse location and distances of projects that could be served by the proposed Project, alternative transportation modes (e.g., rail lines) are generally unavailable or infeasible. Construction projects requiring materials from sources such as the proposed Project will continue to occur with or without the proposed expansion. As a result, the proposed expansion would continue to facilitate reduced vehicle miles traveled and fuel consumption by extending the life of a regional material source that serves local projects.

Following reclamation of the site after mining ends in 2050, the proposed Project will no longer consume diesel fuel or require electrical service. As such, implementation of the proposed Project would have a nominal effect on the local and regional energy supplies. There are no unusual project characteristics that would necessitate the use of off-road equipment that would be less energy-efficient than at comparable quarry sites in the region or State. Therefore, it is expected that fuel consumption associated with the proposed Project would not be any more inefficient, wasteful, or unnecessary than other similar projects of this nature. A less than significant impact would occur in this regard.

Impact 4.7-2: Conflict or obstruct a state or local plan for renewable energy or energy standards.

As discussed above in Impact 4.7-1, implementation of the proposed Project would not cause inefficient, wasteful, or unnecessary energy use, and impacts would be less than significant. Lassen County does not have a stand-alone Climate Action Plan but includes policies for energy resources within the *Lassen County General Plan* Energy Element. The objective of the Energy Element is to promote energy efficiency and the reduction of energy waste. The project does not conflict with or obstruct these goals or policies. Chapter 12.17 (Energy Conservation) of the *Lassen County Building Code* specifically requires compliance with Title 24. The project does not include construction of additional buildings at the Project site. Therefore, implementation of the proposed Project would not conflict with policies of the *Lassen County General Plan* or obstruct their implementation.

The mine operator will also be making improvements to the mixes of asphalt to be more energy and resource efficient, such as using reclaimed asphalt pavement (RAP) in mixes. Current and proposed operations recycle concrete and asphalt and uses the recycled materials in with the new

asphalt materials. Using RAP in mixes requires approximately 16% less energy consumption compared to a virgin hot mix asphalt mixture through re use of asphalt concrete.

As discussed above, renewable resources including geothermal and eligible hydroelectric make up 4.6% of the power mix (PSREC, 2020). Because the proposed quarry expansion will obtain all of its electricity from PSREC, or another supplier that must comply with the California Renewable Portfolio Standard, a substantial portion of the energy used by the proposed Project would be generated from renewable sources. It is also important to note that during the period in which the Project would operate, mining equipment and energy sources could change because of factors such as the availability of alternative equipment technologies and regulatory requirements, thus further reducing energy demand over the life of the proposed Project.

Additionally, the proposed Project is located at the site of an existing quarry and aggregate processing facility with convenient access to a Highway 395 and other regional roadways, providing efficient transportation options for delivering product to throughout Lassen County. By siting the Project at this location, in and around which long-term demand for aggregate is anticipated, and with easy access to major roadways, energy used to transport aggregate materials to end use locations would be less because of shorter haul distances as compared to energy use for transport of aggregate from more distant sources. As a result, the proposed expansion would continue to facilitate reduced vehicle miles traveled and fuel consumption by extending the life of a regional material source that serves local projects.

Based upon the above, the proposed Project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Impacts would be less than significant.

4.7.6 Mitigation Measures

No mitigation measures are required.

4.7.7 Level of Significance after Mitigation

No mitigation measures are required. Impacts would be less than significant.

4.8 Geology and Soils

Expansion of the mining boundary to include an additional 78.6 acres is a substantial change that will require major revisions of the previous EIR due to the involvement of potentially new significant environmental effects pertaining to geology and soils or a substantial increase in the severity of previously identified significant effects under CEQA Guidelines §15162.

This section provides a summary of the geology and soils setting and regulations, summarizes the previous CEQA review of geology and soil impacts of current mining operation, describes the changes to those conditions that will result from the proposed Project, and includes a discussion of the geology and soil impacts of the proposed Project. Some of the information in this section was obtained from the *Preliminary Geotechnical Report Ward Lake Quarry Expansion* (Bajada, 2020) (refer to Appendix F).

4.8.1 Environmental Setting

Regional Geology

The Ward Lake Quarry is located in Litchfield in Lassen County, California. The site lies on the southwest side of Shaffer Mountain at an elevation of approximately 4,500 feet above mean sea level (msl).

The Project site is located on the margin of the Cascade Range and the Basin and Range geologic/geomorphic provinces of California. The Cascade Range province extends from the northern end of the Sierra Nevada north to the Canadian border. In the Project vicinity, the Cascade Range province is bounded to the west by the Klamath Mountain province, to the east by the Basin and Range province, to the south by the Sierra Nevada province, and to the north by the Cascade Range extending through Oregon and Washington.

The Cascade Range province consists of a north-northwest-trending, relatively linear belt of active and dormant strata and shield volcanoes. The regional geologic conditions are dominated by andesitic, rhyolitic, and andesitic volcanic rocks mantled with surficial deposits consisting of pyroclastic rocks, lahar deposits, alluvium, and local lacustrine sediments (Hinds, 1952).

The Basin and Range province is characterized by interior drainage with lakes and playas, and the typical horst and graben structure (subparallel, fault-bounded ranges separated by down-dropped basins). In these basins, moderate to extensive thicknesses of lacustrine (lake) and alluvial deposits are present.

Site Geology

The site is underlain by Quaternary-age terrace deposits and Pleistocene-age volcanic rocks (Grose et al., 2013; Lydon et al., 1960). The terrace deposits are near-shore emergent lacustrine deposits associated with the ancestral Lake Lahontan, which covered most of the project region (Grose et al., 2013). The volcanic rocks consist of interlayered basalt, andesite, and rhyolite tuff and flows labeled the Andesite Flows and Pyroclastics of Litchfield (Grose et al., 2013). Surface geology is illustrated on Figure 3-6.

As described in the *Preliminary Geotechnical Report Ward Lake Quarry Expansion* (Bajada, 2020), volcanic rock within the expansion area was observed to consist of basalt, andesite, and lesser amounts of rhyolite. The basalt was observed within the existing quarry to be weak to hard, highly to slightly weathered, slightly to highly fractured, with clast shapes ranging from angular and prismatic to platy. The andesite and rhyolite were observed to be very weak to weak, completely to moderately weathered, and were largely soil-like with cobble to boulder size spheroidally shaped clasts of weak andesite incorporated into the soil matrix. Thus, the andesite and rhyolite are considered block-in-matrix, or bimrock, layers. The volcanic rock materials were not fully penetrated by explorations and are thought to extend deeper than the anticipated quarry excavations.

Onsite Soils

According to the Natural Resource Conservation Services (NRCS) Web Soil Survey, soils at the Project site are comprised on Devada-Rock outcrop association (2 to 50 percent slopes; non-irrigated land capability class 7e; no specified irrigated land capability classification), Orhood very stony sandy loam (5 to 15 percent slopes; non-irrigated land capability class 7s; no specified irrigated land capability classification), McConnel-Mottsville complex (2 to 9 percent slopes; non-irrigated land capability class 6e), and Fivesprings-Longcreek association (9 to 30 percent slopes; non-irrigated land capability class 7s; no specified land capability classification). These soils are listed by the NRCS as well drained to excessively drained, with no flooding or ponding concerns. Soils are shown on Figure 3-7.

Based on the geotechnical observations at the existing quarry site, rock materials associated with naturally occurring asbestos (NOA) are not present within the proposed quarry expansion area (Bajada, 2020).

Seismicity

The Holocene-active Honey Lake and Warm Springs Valley faults have been mapped in the region, with the Project site being north of the mapped trend of the Warm Springs Valley fault. Both the Honey Lake and Warm Springs faults exhibit right-lateral displacement and are significant faults within the Walker Lane fault zone (Wills, 1990). The Honey Lake fault is about 35 miles long and capable of generating a MW 7.0 earthquake (USGS, 2020b). The Warm Springs Valley fault is about 24 miles long and capable of generating a MW 6.8 earthquake (USGS, 2020b). The Honey Lake fault is located about 7 miles southwest of the Project site. The Warm Springs Valley fault is mapped about 13 miles south of the site. The State's fault location maps do not show the Warm Springs Valley fault projecting north of Honey Lake; however, lineations mapped from aerial photographs of the region and observed faulting within the existing quarry area north through the quarry area with a trend that is coincident with the Warm Springs fault.

The quarry site is not within a special studies zone associated with the Alquist-Priolo Earthquake Fault Zoning Act (AP). Thermal wells and springs exist in the Wendel and Susanville areas; however, there are no known thermal wells or springs on the Project site or adjacent lands.

4.8.2 Regulatory Setting

The following is a description of federal, State, and local environmental laws and policies related to geology and soils that are relevant to the CEQA review process for the proposed expansion area.

Federal

Federal Earthquake Hazards Reduction Act

Passed by Congress in 1977, the Federal Earthquake Hazards Reduction Act is intended to reduce the risks to life and property from future earthquakes. The Act established the National Earthquake Hazards Reduction Program (NEHRP). The goals of NEHRP are to educate and improve the knowledge base for predicting seismic hazards, improve land use practices and building codes, and to reduce earthquake hazards through improved design and construction techniques.

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 (originally enacted as the Alquist-Priolo Special Studies Zones Act and renamed in 1994) and is intended to reduce the risk to life and property from surface fault rupture during earthquakes. The main purpose of the law is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The law only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. The Alquist-Priolo Act requires the State Geologist to establish regulatory zones known as “Earthquake Fault Zones” around the surface traces of active faults and to issue appropriate maps. The maps are distributed to all affected cities counties, and state agencies for this use in planning efforts. Local agencies must regulate most development projects within the zones. Projects include all land divisions and most structures for human occupancy. There are no Earthquake Fault Zones subject to the Alquist-Priolo Earthquake Fault Zoning Act within the project site. Faults close to the project area are discussed in section 4.8.5 below.

Surface Mining and Reclamation Act of 1975

The principal legislation addressing mineral resources in California is the State Surface Mining and Reclamation Act of 1975 (SMARA) (Public Resources Code 2710-2719), which was enacted in response to land use conflicts between urban growth and essential mineral production. The stated purpose of SMARA is to provide a comprehensive surface mining and reclamation policy that will encourage the production and conservation of mineral resources while ensuring that adverse environmental effects of mining are prevented or minimized; that mined lands are reclaimed and residual hazards to public health and safety are eliminated; and that consideration is given to recreation, watershed, wildlife, aesthetics, and other related values.

Local

Lassen County General Plan

The *Lassen County General Plan* contains the following goals, policies, and implementation measures regarding soil resources and geologic hazards:

GOAL N-2: To protect and maximize the present and future productive, economic, and environmental values of the County's soil resources.

- Policy NR-8: The County recognizes the need to protect and conserve areas where soils have high resource values, especially in terms of potential agricultural productivity.
- Policy NR-9: The County discourages the development of land having soils of significant agricultural value for purposes other than agriculture or land uses directly related to agriculture.
- Policy NR-10: The County shall exercise an appropriate degree of regulation designed to minimize soil erosion, including the administration of standards for grading and site clearance related to development projects.
- Policy NR-11: The County encourages State and Federal programs and projects designed to reduce soil erosion and to repair areas damaged by erosion.
- Policy NR-12: The County encourages sound soil management and erosion prevention and control programs and projects, including the use of windbreaks, minimum tillage practices, grazing management, and riparian area rehabilitation.
- Policy OS-19: The County shall consider documented evidence of geologic hazards, including but not limited to Alquist-Priolo Earthquake Fault Zones, in review of proposed development projects or proposed land use designations and zoning which would facilitate residential and community development, and shall determine how the safety of the public may be advanced by the use of open space provisions relative to those hazards.

4.8.3 Previous CEQA Reviews

1981 EIR

The 1981 EIR determined that there would be significant environmental effects that cannot be avoided due to the characteristics of rock quarry/crusher operations, changes in existing topography cannot be alleviated. Mitigation measures required by the 1981 EIR to minimize significant effects are as follows:

- *Topographical changes within the designated source areas which will result from excavation of rock would be reshaped and steep slopes reduced to a maximum of 2:1.*
- *Reshaping and reseeded of excavated areas would be implemented on a continuing basis as removal of materials as proceeds and is based upon an average area to be disturbed.*
- *Department of Fish and Game and Soil Conservation Service will be sought in order to determine the most suitable range grasses for efficient erosion control.*
- *Blasting required will be done by individuals with State licenses.*
- *Crushing operations will have no contaminants that would require disposal. Waste aggregate will be spread evenly over excavated areas before reseeding takes place.*
- *Steep slopes will be reduced.*

1997 EIR

The 1997 EIR states that changes in surface geology and topography are significant avoidable impacts as well as significant avoidable cumulative impacts. Mitigation measures related to reclamation practices were found to mitigate these cumulative and project impacts to less than significant levels (Summary Table 3-10 of the 1997 EIR). It is also stated on page 4-3 of the 1997 EIR that mining has been designated in the Area Plan as acceptable industrial land use therefore no significant cumulative impacts would result from the expansion of the mining operation relative to land use policies. Page 13-3 states:

“While the topography of the site will change permanently there is no direct geologic hazard associated with this change. These mitigation measures are expected to reduce the impacts to geologic features on the site by concurrently mitigating the indirect impacts of the mining operation on scenic views and wildlife.”

The implementation of mitigation measures related to reclamation practices (measure 1a) contained in the 1997 EIR as well as mitigation measures from the 1996 initial study were expected to mitigate impacts. Project impacts and cumulative impacts were less than significant after mitigation.

2019 EIR

Lassen County determined the in the 2019 EIR that geologic resources (identified through the Initial Study) will have no impact, and the project description did not involve any new significant effects or any increase in the severity of previously determined impacts associated with geology and soils.

4.8.4 Thresholds of Significance

In accordance with CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the project. The following significance thresholds related to *Geology and Soils* have been derived from Appendix G of the CEQA Guidelines:

- *Expose people or structures to potential substantial adverse effects, including 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.*
 - ii. *Strong seismic ground shaking.*
 - iii. *Seismic-related ground failure, including liquefaction.*
 - iv. *Landslides.*
- *Result in substantial soil erosion or the loss of topsoil.*

- *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse.*
- *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.*
- *Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.*
- *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.*

4.8.5 Impact Analysis

The proposed Project does not include changes to mining or reclamation methods within the existing mining area of the project site. Therefore, the analysis of geology and soil impacts focuses on the impacts within the proposed 78.6-acre expansion area. Mining in the expansion area will occur as described in the Reclamation Plan Amendment and in accordance with the recommendations contained in the *Preliminary Geotechnical Report Ward Lake Quarry Expansion* (Bajada, 2020) prepared for the proposed quarry expansion area (refer to Appendix F).

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

Areas of No Project Impact

As required by CEQA Guidelines §15082, the County issued a Notice of Preparation (NOP) on April 28, 2021 that summarized the proposed Project, stated its intention to prepare an EIR, and requested comments regarding the scope and content of the EIR from responsible and trustee agencies. In the course of the County's initial evaluation, certain impacts of the proposed Project were found to not to be significant because of the inability of a project of this scope to create such impacts or the absence of project characteristics producing effects of this type. The effects determined not to be significant are not required to be included in primary analysis sections of the DSEIR. As such, the following impacts either are not applicable to the proposed Project or are not reasonably foreseeable and are not addressed further within this section:

- *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.*

As previously described above under Subsection 4.8.1, *Environmental Setting*, soils at the Project site are comprised on Devada-Rock outcrop association (2 to 50 percent slopes; non-irrigated land capability class 7e; no specified irrigated land capability classification), Orhood very stony sandy loam (5 to 15 percent slopes; non-irrigated land capability class

7s; no specified irrigated land capability classification), McConnel-Mottsville complex (2 to 9 percent slopes; non-irrigated land capability class 6e), and Fivesprings-Longcreek association (9 to 30 percent slopes; non-irrigated land capability class 7s; no specified land capability classification). These soils are listed by the NRCS as well drained to excessively drained, with no flooding or ponding concerns. The proposed quarry expansion area does not contain expansive soils as defined in Table 18-1 B under the Uniform Building Code of 1994. The risks of injury, loss of life or property would not be considered substantial, and no impact would occur in this regard.

- *Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.*

The proposed quarry expansion does not include the use of any septic tanks or alternative wastewater disposal systems. No impact would occur in this regard.

Project Impacts

Impact 4.8-1: Expose people or structures to potential substantial adverse effects, including risk of loss, injury, or death involving:

- 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?*

Active faults are defined by the Alquist-Priolo Act as faults that exhibit evidence of surface rupture occurring within the last 11,000 years (SMGB, 1972). The Project site is located about 7 miles from the closest State-mapped Holocene-active fault. However, as shown on Plate 9, it appears that possible northerly extension of the Holocene-active Warm Springs Valley fault might project through the quarry area (Bajada, 2020). The Warm Springs Valley fault is zoned as Holocene-active approximately 13.6 miles south of the project site; however, the State has not zoned northern extensions of the fault as meeting the Alquist-Priolo Act criteria for an active fault (Wills, 1990).

The Warm Springs fault is part of the Honey Lake fault zone that forms the eastern margin of the Northern Walker Lane, a seismogenic zone that extends from the Surprise Valley westward to the Mohawk Valley. It is thought that the Northern Walker Lane accommodates up to about 5 millimeters of slip per year (mm/yr) and that the Honey Lake fault system experiences about 2 mm/yr (Gold et al., 2013). The Warm Springs Valley fault has even less deformation and is thought to have a slip rate of 0.2mm/yr during the latest Quaternary period (Gold et al., 2013). The Honey Lake fault has had numerous major earthquakes since about 7,000 years ago and it has an estimated recurrence interval of 730 to 990 years (Turner et al., 2008). The Warm Springs Valley fault, exhibiting relatively less deformation, likely has a longer recurrence interval.

There could be a risk of fault rupture across the Project site from the Warm Valley Springs fault (Bajada, 2020). Based on a moment magnitude of 6.8 or less that could occur along the Warm Springs Valley fault, it is estimated that a maximum ground displacement of about 2.5 feet could occur during an earthquake (Wells & Coppersmith, 1994). However, the State evaluated the fault and estimated that the fault strands projecting into the quarry area exhibited insufficient evidence

of recency of movement that they were not zoned as active (Wills, 1990). The potential risk of loss, injury, or death are relatively low, especially with a relatively long recurrence interval for that fault. The risk might be rockfall triggered by ground shaking but with properly designed slopes and benches, this risk should be reduced to a negligible level. Mining in the proposed quarry expansion area will be conducted in accordance with the recommendations contained in the *Preliminary Geotechnical Report Ward Lake Quarry Expansion* (Bajada, 2020) (refer to Appendix F). Impacts are considered less than significant in this regard.

ii. Strong seismic ground shaking?

As referenced in Subsection 4.8.1, *Environmental Setting*, the Warm Valley Springs fault is mapped about 13 miles south of the site and may extend through the site. Aerial photographs of the region observed faulting within the existing quarry area and north through the proposed quarry expansion area with a trend that is coincident with the Warm Springs fault.

Probabilistic evaluations of horizontal strong ground motion that could affect the site were performed using attenuation evaluation methods provided by the U.S. Geological Survey (USGS, 2020a). The evaluations were performed using an estimated shear wave velocity in the upper 100 feet of the profile of 537 meters per second. Evaluations were performed for upper-bound (UBE) and design-basis (DBE) probabilistic exposures (refer to Table 4-18, below). The UBE corresponds to horizontal ground accelerations having a 10 percent probability of exceedance in a 100-year exposure period, with a statistical return period of 949 years. The DBE corresponds to horizontal ground accelerations having a 10 percent probability of exceedance in a 50-year, exposure period, with a statistical return period of 475 years. It should be noted that although the seismic hazard models used for this study predict the probability of exceedance for various levels of acceleration in a given exposure period, the models are not able to account for the effect that the passage of time since past earthquakes has on future earthquake probability. Thus, while time may affect the incipient risk of earthquakes occurring, the UBE and DBE values are based on any 100-year and 50-year exposure period, respectively, regardless of how recently earthquakes have occurred.

The results of these evaluations are presented in Table 4-18. The existing quarry and proposed quarry expansion area are not within a special studies zone associated with the Alquist-Priolo Earthquake Fault Zoning Act (AP). The impact related to risk of loss, injury, or death due to strong seismic shaking would be less than significant.

Table 4-18 PROBABILISTIC GROUND MOTION DATA				
Earthquake Level	Probabilistic Estimate Exposure Period (years)	Probability of Exceedance (%)	Return Period (Years)	Estimated Peak Horizontal Ground Acceleration
Upper-Bound Ground-Motion	100	10	949	0.296
Design-Basis Ground-Motion	50	10	475	0.215
Source: Bajada, 2020.				

iii. Seismic-related ground failure, including liquefaction?

Liquefaction is described as the sudden loss of soil shear strength due to a rapid increase of soil pore water pressures caused by cyclic loading from a seismic event. Liquefied soils act more like

a fluid than a solid when shaken during an earthquake. For liquefaction to occur granular solid, high groundwater table and a low density in the granular soils underlying the site need to be present. If those factors are present, there is a potential that soils could liquefy during a seismic event. Most materials located within the proposed quarry expansion area consist of volcanic rock materials and terrace deposits. The volcanic rock materials are not subject to liquefaction. The terrace deposits are thought to contain appreciable fines and groundwater is anticipated to be located at depths below 50 feet (Bajada, 2020). Terrace deposits are considered to have a low potential for liquefaction susceptibility. Impacts are considered less than significant in this regard.

iv. Landslides?

Landslides are a movement of rock, earth, or debris down a sloped section of land affecting the natural stability of the land. Landslides are caused by unstable slopes. Unstable slopes are caused by earthquakes, rain, volcanoes, and other factors. Areas that are prone to landslides include areas of old or existing landslides, base of slopes, in drainage hollows, at the base or top of steep cut slopes. The California Department of Conservation has created landslide maps throughout California and this mine expansion area is not within any of the mapped landslide areas. Soils in this expansion area are not prone to landslides and the chances of a landslide are very low, and no existing, past, or incipient landslides were observed within the proposed quarry expansion area.

The *Preliminary Geotechnical Report Ward Lake Quarry Expansion* (Bajada, 2020) includes maximum recommend slope inclinations, slope heights, as well as bench recommendations for the expansion area. As discussed in the Reclamation Plan Amendment, the final slope of the proposed expansion area will be 1:1 (H:V). Mine faces will be shaped to have a 50-foot highwall and 12-foot benches at a 1:1(H:V) slope. The quarry wall will be composed of hard rock and will not require stabilization. The area is composed of hard rock and highwalls will be graded at an inclination as to meet the minimum factor of safety (Bajada, 2020). Benches will be constructed to drain to the margins of the highwall and/or to centralized collection areas that capture and convey drainage to the bottom of the cut slope. Mining at the project site will be conducted per the recommendations contained in the *Preliminary Geotechnical Report Ward Lake Quarry Expansion* (Bajada, 2020) prepared for the expansion area (refer to Appendix F), which will minimize the risk of landslides on cut faces. Impacts are considered less than significant in this regard.

Impact 4.8-2: Result in substantial soil erosion or the loss of topsoil?

The proposed Project has the potential to cause localized erosion through actions such as excavation, vegetation clearing and disturbing upland areas. Standard soil erosion protocols are currently practiced at the current mining area will be applied to operations in the expansion area. The erosion control protocols included in the Reclamation Plan Amendment include:

- Use of berms, water bares, or rolling dips
- Diverting run-on from stockpile areas
- Planting vegetation/installing stabilizers as necessary
- Retention of all stormwater runoff within quarry to settling ponds.

As described in the Reclamation Plan Amendment, the topsoil stockpiles will be protected from wind and water erosion by planting with an erosion control mix, as well as keeping the stockpiles in low profile with moderate slopes. Best Management Practices (BMPs) for the control of dust

included in the Reclamation Plan Amendment will also reduce erosion at the site. These include keeping stockpile and work surfaces moist, providing earthen wind breaks, and placing fine aggregate stockpiles between coarse aggregate piles to screen from wind. Additional BMPs to be implemented during and after reclamation activities are included in the Reclamation Plan Amendment. These include:

- Mulches
- Vegetative cover
- Straw wattles
- Water bars/rolling dips
- Rock-lined ditches.

The mining protocols and BMPs included in the Reclamation Plan Amendment will minimize soil erosion and loss of topsoil at the site. This impact will be less than significant.

Impact 4.8-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?

Liquefaction is described as the sudden loss of soil shear strength due to a rapid increase of soil pore water pressures caused by cyclic loading from a seismic event. In simple terms, it means that a liquefied soil acts more like a fluid than a solid when shaken during an earthquake. For liquefaction to occur, the following are needed:

- Granular soils (sand, silty sand, sandy silt, and some gravels);
- A high groundwater table; and
- A low density in the granular soils underlying the site.

If those criteria are present, then there is a potential that the soils could liquefy during a seismic event. The adverse effects of liquefaction include local and regional ground settlement, ground cracking and expulsion of water and sand, the partial or complete loss of bearing and confining forces used to support loads, amplification of seismic shaking, and lateral spreading. In general, the effects of liquefaction on the proposed Project could include:

- Lateral spreading;
- Vertical settlement; and/or
- The soils surrounding lifelines can lose their strength and those lifelines can become damaged or severed.

Lateral spreading is defined as lateral earth movement of liquefied soils, or soil riding on a liquefied soil layer, downslope toward an unsupported slope face, such as a creek bank, or an inclined slope face. In general, lateral spreading has been observed on low to moderate gradient slopes but has been noted on slopes inclined as flat as one degree.

Most materials located within the proposed quarry area consist of volcanic rock materials and terrace deposits. The volcanic rock materials are not subject to liquefaction. The terrace deposits are thought to contain appreciable fines and groundwater is anticipated to be located at depths below 50 feet, per the exploratory holes advanced with the air-percussion drill rig (see Appendix

F). Thus, terrace deposits are considered to have a low potential for liquefaction susceptibility or lateral spreading. Impacts are considered less than significant in this regard.

Impact 4.8-4: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The proposed quarry expansion would result in a significant impact to paleontological resource if it would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. There are no known paleontological resources or unique geologic features present in the proposed quarry expansion area. According to the mine operator no paleontological resources have been encountered during mining operations. However, there is a chance that unknown paleontological resources may exist below the ground surface and could be encountered during mining and reclamation activities. Project implementation would result in a significant impact if paleontological resources were directly or indirectly destroyed during activities at the Project site. Implementation of Mitigation Measure 4.8-1 would reduce impacts to less than significant levels.

4.8.6 Mitigation Measures

The following mitigation measure is included for potentially significant impacts to unique paleontological resources.

MM 4.8-1: *Avoid and Minimize Impacts to Paleontological Resources.* Should any potentially unique paleontological resources (fossils) be encountered during development activities, work shall be suspended, and the County shall be immediately notified. At that time, the County will coordinate any necessary investigation of the discovery with a qualified paleontologist. The mine operator shall be required to implement mitigation necessary for the protection of paleontological resources. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures.

4.8.7 Level of Significance after Mitigation

Less than significant impact with mitigation incorporated.

4.9 Greenhouse Gas Emissions

Expansion of the mining boundary of the current operation, increasing the life of the mine to 2050, and increasing the annual production volume of the mine from 100,000 tons to 200,000 tons are substantial changes proposed in the Project that will require major revision of the previous EIR due to the involvement of potentially new significant environmental effects pertaining to greenhouse gas (GHG) emissions or a substantial increase in the severity of previously identified significant effects under CEQA Guidelines §15162.

Impacts related to GHG emissions of the existing mining operation were evaluated in the 2019 EIR. This section provides a summary of the GHG setting and regulations, summarizes the previous CEQA review of greenhouse gas impacts of current mining operation, describes the changes to those conditions that will result from the proposed Project, and includes a discussion of the GHG impacts of implementing the proposed Use Permit and Reclamation Plan. Much of the information in this section is based on the Greenhouse Gas Analysis contained in the *Ward Lake Pit Expansion Air Quality and Health Risk Assessment Technical Report* prepared by RCH Group September 9, 2021 (refer to Appendix D).

4.9.1 Environmental Setting

“Global warming” and “global climate change” are the terms used to describe the increase in the average temperature of the earth’s near-surface air and oceans since the mid-20th century and its projected continuation. Warming of the climate system is now considered to be unequivocal, with global surface temperature increasing approximately 1.33 degrees Fahrenheit (°F) over the last 100 years. Continued warming is projected to increase global average temperature between 2 and 11°F over the next 100 years.

Natural processes and human actions have been identified as the causes of this warming. The International Panel on Climate Change (IPCC) concludes that variations in natural phenomena such as solar radiation and volcanoes produced most of the warming from pre-industrial times to 1950 and had a small cooling effect afterward (IPCC, 2014). After 1950, however, increasing GHG concentrations resulting from human activity such as fossil fuel burning, and deforestation have been responsible for most of the observed temperature increase. These basic conclusions have been endorsed by more than 45 scientific societies and academies of science, including all of the national academies of science of the major industrialized countries. Since 2007, no scientific body of national or international standing has maintained a dissenting opinion.

Increases in GHG concentrations in the earth’s atmosphere are thought to be the main cause of human-induced climate change. The IPCC is now 95 percent certain that humans are the main cause of current global warming (IPCC, 2014). GHG naturally trap heat by impeding the exit of solar radiation that has hit the earth and is reflected back into space. Some GHG occur naturally and are necessary for keeping the earth’s surface inhabitable. However, increases in the concentrations of these gases in the atmosphere during the last 100 years have decreased the amount of solar radiation that is reflected back into space, intensifying the natural greenhouse effect, and resulting in the increase of global average temperature.

Gases that trap heat in the atmosphere are referred to as GHG because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The accumulation of GHG has been implicated as the driving force for global climate change. The primary GHG are carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O), ozone, and water vapor.

While the presence of the primary GHG in the atmosphere are naturally occurring, CO₂, CH₄, and N₂O are also emitted from human activities, accelerating the rate at which these compounds occur within earth's atmosphere. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas methane results from off-gassing associated with agricultural practices, coal mines, and landfills. Other GHG include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, and are generated in certain industrial processes.

CO₂ is the reference gas for climate change because it is the predominant GHG emitted. The effect that each of the aforementioned gases can have on global warming is a combination of the mass of their emissions and their global warming potential (GWP). GWP indicates, on a pound-for-pound basis, how much a gas is predicted to contribute to global warming relative to how much warming would be predicted to be caused by the same mass of CO₂. CH₄ and N₂O are substantially more potent GHG than CO₂, with GWP of 28 and 265 times that of CO₂, respectively (IPCC, 2014).

In emissions inventories, GHG emissions are typically reported in terms of pounds or metric tons (MT) of CO₂ equivalents (CO₂e). CO₂e are calculated as the product of the mass emitted of a given GHG and its specific GWP. While CH₄ and N₂O have much higher GWP than CO₂, CO₂ is emitted in such vastly higher quantities that it accounts for the majority of GHG emissions in CO₂e.

Fossil fuel combustion, especially for the generation of electricity and powering of motor vehicles, has led to substantial increases in CO₂ emissions (and thus substantial increases in atmospheric concentrations of CO₂). In pre-industrial times (c. 1860), concentrations of atmospheric CO₂ were approximately 280 parts per million (ppm). By November 2020, atmospheric CO₂ concentrations had increased to 413 ppm, 48 percent above pre-industrial concentrations (NOAA, 2021).

There is international scientific consensus that human-caused increases in GHGs have and will continue to contribute to global warming. Potential global warming impacts in California may include, but are not limited to, loss in snowpack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects are likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity (CalEPA, 2006).

Greenhouse Gas Regional Emission Estimates

Worldwide emissions of GHG in 2017 were estimated at 48.4 billion metric tons of CO₂e (WRI 2021). This value includes ongoing emissions from industrial and agricultural sources, but excludes emissions from land use changes.

In 2018, the United States emitted about 6,677 million metric tons of CO₂. Emissions increased from 2017 to 2018 by 3.1 percent. The increase in 2018 was largely driven by an increase in emissions from fossil fuel combustion, which was a result of multiple factors, including more electricity use due to greater heating and cooling needs due to a colder winter and hotter summer in 2018 in comparison to 2017 (U.S. EPA, 2020). GHG emissions in 2018 (after accounting for sequestration from the land sector) were 10.2 percent below 2005 levels.

In 2018, California emitted approximately 425 million metric tons of CO₂e, 0.8 million metric tons of CO₂e higher than 2017 levels and six million metric tons of CO₂e below the 2020 GHG limit of 431 million metric tons of CO₂e (CARB 2020). Consistent with recent years, these reductions have occurred while California's economy has continued to grow and generate jobs. The transportation sector remains the largest source of GHG emissions in the state with 40 percent of the emissions in 2018, but saw a decrease in emissions compared to 2017 (CARB, 2020).

Emissions from the electricity sector account for 15 percent of the inventory and showed a slight increase in 2018 due to less hydropower. California in 2018 used more electricity from zero-GHG sources (for the purpose of the GHG inventory, these include hydro, solar, wind, and nuclear energy) than from GHG-emitting sources for both in-state generation and total (in-state plus imports) generation. The industrial sector has seen steady emissions in the past few years, and remains at 21 percent of the inventory (CARB, 2020).

Existing GHG Emissions

Equipment currently used for mining includes loaders, generators, a concrete batch plant, concrete trucks, service truck, man lift, belly dump, articulated dump truck, crusher, and asphalt batch plant. The current operation maintains a permit to operate (PTO-19-140: expiration date March 31, 2024) for onsite equipment such as a hot mix asphalt plant, a lime slurry mix plant, a concrete plant, a crushing plant, a wash plant, a sand plant, and several diesel generators (one 750 horsepower [hp] generator associated with the crushing plant, one 475 hp generator associated with the portable plant, and one 469 hp generator associated with the wash plant). The facility also has a daily and annual limit on the number of haul truck trips. Sources of greenhouse gas emissions generated by the current operation include the onsite mobile equipment, generators for stationary equipment, and material haul trucks. An estimate of the GHG emissions generated by the current operation is included in Table 4-19.

4.9.2 Regulatory Setting

The following is a description of State and local environmental laws and policies that are relevant to the CEQA review process for the proposed quarry expansion area.

State

Assembly Bill 32

California Assembly Bill (AB) 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction is in the process of being accomplished by enforcing a statewide cap on GHG emissions

that was phased in starting in 2012. Towards this progress, in 2018, California emitted approximately 425 million metric tons of CO₂e, six million metric tons of CO₂e below the 2020 GHG limit of 431 million metric tons of CO₂e and two million metric tons of CO₂e below the 1990 GHG limit of 427 million metric tons of CO₂e. To effectively implement the cap, CARB develops and implements regulations to reduce statewide GHG emissions from stationary sources. California has taken these measures, because no project individually could have a major impact (either positively or negatively) on the global concentration of GHG.

AB 32 required CARB to adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclosed how it arrived at the cap; instituted a schedule to meet the emissions cap; and developed tracking, reporting, and enforcement mechanisms to ensure that the state reduced GHG emissions enough to meet the cap. AB 32 also included guidance on instituting emissions reductions in an economically efficient manner, along with conditions to ensure that businesses and consumers were not unfairly affected by the reductions. Using these criteria to reduce statewide GHG emissions to 1990 levels by 2020 represented an approximate 25 to 30 percent reduction in emissions levels. However, CARB had discretionary authority to seek greater reductions in more significant and growing GHG sectors, such as transportation, as compared to other sectors that were not anticipated to significantly increase emissions.

CARB Climate Change Scoping Plan

AB 32 required CARB to develop a Scoping Plan that describes the approach California will take to reduce GHGs to achieve the goal of reducing emissions to 1990 levels by 2020. The Scoping Plan was first approved by CARB in 2008 and must be updated every five years. The initial AB 32 Scoping Plan contained the main strategies for California to reduce the GHG. The initial Scoping Plan had a range of GHG reduction actions which included direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 program implementation fee regulation to fund the program. In August 2011, the initial Scoping Plan was approved by CARB.

The 2013 Scoping Plan Update built upon the initial Scoping Plan with new strategies and recommendations. The 2013 Update identified opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The 2013 Update defined climate change priorities for the subsequent five years and set the groundwork to reach California's long-term climate goals set forth in Executive Order S-3-05. The 2013 Scoping Plan Update highlighted California progress toward meeting the near-term 2020 GHG emission reduction goals defined in the initial Scoping Plan. In the 2013 Update, nine key focus areas were identified (energy, transportation, agriculture, water, waste management, and natural/working lands, along with short-lived climate pollutants, green buildings, and the cap-and-trade program).

In May 2014, CARB approved the First Update to the Climate Change Scoping Plan (Updated Scoping Plan) which describes the progress made to meet the near-term (2020) objectives of AB 32 and defines California's climate change priorities and activities for the next several years (CARB 2014). The Updated Scoping Plan identifies the 2020 emissions limit as 431 MMT CO₂e and the 2020 business-as-usual forecast as 509 MMT CO₂e. Finally, the Updated Scoping Plan provides recommendations for establishing a mid-term emissions limit that aligns with the long-term (2050) goals of Executive Order S-3-05. The recommendations cover the energy, transportation,

agriculture, water, waste management, natural and working lands, short-lived climate pollutants, green building, and cap-and-trade sectors.

The initial Scoping Plan recommended that local governments achieve a 15-percent reduction below 2005 levels by 2020, which aligns with the State's goal of not exceeding 1990 emissions levels by 2020. However, the Updated Scoping Plan does not contain a recommended reduction level or percent for local government's municipal operations. The CARB is moving forward with a second update to the Scoping Plan. The Final Proposed 2017 Climate Change Scoping Plan update was released in November 2017. The CARB has updated the Scoping Plan twice, approving the First Update to the Climate Change Scoping Plan (Updated Scoping Plan) in May 2014, and the 2017 Scoping Plan in December 2017.

The 2017 Scoping Plan identifies progress made to meet the near-term (2020) objectives of AB 32 and defines California's climate change priorities and activities for the next several years (CARB 2017). The 2017 Scoping Plan identifies the 2020 emissions limit as 431 MMT CO₂e and the 2020 business-as-usual forecast as 509 MMT CO₂e. The 2017 Climate Change Scoping Plan provides strategies for meeting the mid-term 2030 greenhouse gas reduction target set by Senate Bill (SB) 32. The plan also identifies how the State can substantially advance toward the 2050 greenhouse gas reduction target of Executive Order S-3-05, which consists of reducing greenhouse gas emissions to 80 percent below 1990 levels. The recommendations cover the key sectors, including energy and industry; transportation; natural and working lands; waste management; and water. The recommended measures in the 2017 Scoping Plan are broad policy and regulatory initiatives that will be implemented at the State level and do not relate to the construction and operation of individual projects. The initial Scoping Plan recommended that local governments achieve a 15-percent reduction below 2005 levels by 2020, which aligns with the State's goal of not exceeding 1990 emissions levels by 2020. However, the 2017 Scoping Plan does not contain a recommended reduction level or percent for local government's municipal operations.

Executive Order B-30-15

On April 29, 2015, Executive Order No. B-30-15 was issued to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The new plan, outlined in SB 32, involves increasing renewable energy use, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries. It is designed so State agencies do not fall behind the pace of reductions necessary to reach the existing 2050 reduction goal. Executive Order No. B-30-15 orders "All State agencies with jurisdiction over sources of GHG emissions shall implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 targets." The Executive Order also states that "CARB shall update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent." On November 30, 2017, the Second Update to the Climate Change Scoping Plan was approved by the CARB.

4.9.3 Previous CEQA Reviews

The environmental documents prepared in 1981 and 1997 for mining operations were prepared prior to implementation of greenhouse gas emission regulations and did not include analysis related to greenhouse gas emissions.

2019 EIR

The GHG impacts of the current mining operation were analyzed in the 2019 EIR. The County determined in the Initial Study for the current operation that there was a less than significant impact to GHG emissions, directly or indirectly, that may significantly impact the environment. No changes were proposed to the permitted production of the asphalt or concrete plants, and therefore the total amount of GHG produced by the plant remains unchanged.

The EIR included an analysis of potential truck emissions completed by Lassen County using significance thresholds from the Bay Area Air Quality Management District (BAAQMD), which resulted in values below the CEQA thresholds of significance for GHG. The additional analysis including the calculated emissions from the asphalt plant and concrete plant, support the assessment and conclusion that the 2019 project would have a less than significant impact to GHG emissions, directly or indirectly, on the environment. The analysis in the 2019 EIR determined the project was not in violation of any State or federal standards. The transportation of materials from facilities further away would result in higher emissions per ton of material produced due to the increased emissions from miles traveled by truck. The project was determined not to result in a cumulative impact that would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Project-level and cumulative impacts to greenhouse gas emissions were determined to be less than significant. No mitigation measures were required.

4.9.4 Thresholds of Significance

In accordance with CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the project. The following significance thresholds related to *Greenhouse Gases* have been derived from Appendix G of the CEQA Guidelines:

- *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.*
- *Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.*

At this time, neither the Lassen County APCD or the County itself has adopted numerical thresholds of significance for GHG emissions that would apply to the proposed Project. Additionally, neither Lassen County APCD or Lassen County have an adopted regional-specific plan for reducing GHG emissions. Lassen County recommends that all projects subject to CEQA review be considered in the context of GHG emissions and climate change impacts, and that CEQA documents include a quantification of GHG emissions from all project sources, as well as minimize and mitigate GHG emissions as feasible.

In light of the lack of established GHG emissions thresholds that would apply to the proposed Project, CEQA allows lead agencies to identify thresholds of significance applicable to a project that are supported by substantial evidence. Substantial evidence is defined in the CEQA statute to

mean “facts, reasonable assumption predicated on facts, and expert opinion supported by facts” (14 CCR 15384(b)). Substantial evidence can be in the form of technical studies, agency staff reports or opinions, expert opinions supported by facts, and prior CEQA assessments and planning documents. Therefore, to establish additional context in which to consider the order of magnitude of the proposed Project’s GHG emissions, this analysis accounts for the following considerations by other government agencies and associations about what levels of GHG emissions constitute a cumulatively considerable incremental contribution to climate change:

- Sacramento Metropolitan Air Quality Management District (SMAQMD) established thresholds, including 1,100 metric tons of CO₂e per year for the construction or operational phase of land use development projects, or 10,000 direct metric tons of CO₂e per year from stationary source projects (SMAQMD, 2018).
- Placer County Air Pollution Control District (PCAPCD) recommends a tiered approach to determine if a project’s GHG emissions would result in a significant impact. First, project GHG emissions are compared to the de minimis level of 1,100 metric tons of CO₂e per year. If a project does not exceed this threshold, it does not have significant GHG emissions. If the project exceeds the de minimis level and does not exceed the 10,000 metric tons of CO₂ per year bright line threshold, then the project’s GHG can be compared to the efficiency thresholds. These thresholds are 4.5 metric tons of CO₂e per-capita for residential projects in an urban area, and 5.5 metric tons of CO₂e per-capita for residential projects in a rural area. For nonresidential development, the thresholds are 26.5 metric tons of CO₂e per 1,000 square feet for projects in urban areas, and 27.3 metric tons of CO₂e per 1,000 square feet for projects in rural areas. The PCAPCD bright-line GHG threshold of 10,000 metric tons of CO₂e per year is also applied to land use project’s construction and operational phases. Generally, GHG emissions from a project that exceed 10,000 metric tons of CO₂e per year would be deemed to have a cumulatively considerable contribution to global climate change (PCAPCD, 2017).
- Bay Area Air Quality Management District (BAAQMD) has adopted 1,100 metric tons of CO₂e per year as a project-level bright-line GHG significance threshold that would apply to operational emissions from mixed land-use development projects, a threshold of 10,000 metric tons of CO₂e per year as the significance threshold for operational GHG emissions from stationary source projects, and an efficiency threshold of 4.6 metric tons of CO₂e per service population per year (BAAQMD, 2017).
- South Coast Air Quality Management District (SCAQMD) formed a GHG CEQA Significance Threshold Working Group to work with SCAQMD staff on developing GHG CEQA significance thresholds until statewide significance thresholds or guidelines are established. The SCAQMD adopted an interim 10,000 metric tons of CO₂e per-year screening level threshold for stationary source/industrial projects for which the SCAQMD is the lead agency (SCAQMD Resolution No. 08-35, December 5, 2008).

As described, the 10,000 metric tons of CO₂e per year threshold is used by SMAQMD, PCAPCD, BAAQMD, and SCAQMD for industrial and/or stationary source GHG emissions. Since the proposed Project is an industrial project that includes stationary sources (i.e., diesel generators), the proposed Project’s GHG emissions were compared to the 10,000 metric tons of CO₂e per year quantitative threshold. The substantial evidence for this GHG emissions threshold is based

on the expert opinion of various California air districts, which have applied the 10,000 metric tons of CO_{2e} per year threshold in numerous CEQA documents where those air districts were the lead agency.

4.9.5 Impact Analysis

Sources of greenhouse gas emissions generated by the current operation include onsite mobile equipment, generators for stationary equipment, and material haul trucks. The proposed Project will result in an increase in GHG emissions generated by the existing mining operation. The Project includes increasing crushing operations from 100,000 to 200,000 tons per year and expansion of the mine to include an additional 78.6 acres of mining area. The typical and maximum daily operations are not expected to change as a result of the proposed quarry expansion. The end date of mining would be extended to 2050; an additional 20 years. The equipment supporting for material processing (i.e., loaders, excavators) would also increase in annual operations to match the increase in crushing operations. The proposed Project would not change the hot mix asphalt plant, the lime slurry mix plant, the concrete plant, portable plant, and diesel generator operations associated with hot mix asphalt plant and portable plant nor would the proposed Project change the daily or annual haul truck trip limit.

The analysis of this impact includes two primary areas of focus. The first area of focus in this impact analysis is the quantification and disclosure of the anticipated GHG emissions that would result from operation of the proposed Project. GHGs have been quantified in order to show the extent to which the proposed Project may increase GHGs as compared to the existing environmental setting.

The second area of focus is the proposed Project's consistency with applicable statewide regulations and programs adopted to achieve state and regional reductions in GHG emissions. As described previously in this section, a numerical threshold of significance for GHG emissions has not been established by Lassen County. Rather, Lassen County has determined that the appropriate threshold of significance for this Project is current guidance of 10,000 metric tons of CO_{2e} per year and, in so doing, has determined that this value is consistent with applicable regulations and programs.

As previously discussed above, Lassen County does not have a stand-alone Climate Action Plan but includes policies for energy resources within the County's General Plan Energy Element. The objective of the Energy Element is to promote energy efficiency and the reduction of energy waste. The project does not conflict with or obstruct these goals or policies. Chapter 12.17 (Energy Conservation) of the *Lassen County Building Code* requires compliance with Title 24.

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

Project Impacts

Impact 4.9-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

The *Ward Lake Pit Expansion Air Quality and Health Risk Assessment Technical Report* (RCH Group, 2021) included estimates of the existing condition and the proposed Project's estimated operational GHG emissions. The estimated annual greenhouse gas emissions are included in Table 4-19. The estimated annual incremental GHG emissions of the Project would be approximately 416 metric tons of CO₂e, which is well below the significance threshold of 10,000 metric tons of CO₂e. Therefore, the proposed Project would have a less than significant impact to GHG emissions, directly or indirectly, on the environment.

Table 4-19 ANNUAL GREENHOUSE GAS EMISSIONS (METRIC TONS)			
Emission Source	Existing Condition	Proposed Project	Project Increment
Onsite Equipment	94	155	61
Generator -Crushing Plant	1,456	1,811	355
Generator -Portable Plant	914	914	-
Generator -Wash Plant	903	903	-
Haul Trucks	546	546	-
Total	3,913	4,392	416
Significance Threshold			10,000
Exceeds Threshold?			No
Source: RCH Group, 2021.			

Impact 4.9-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Neither Lassen County APCD nor Lassen County has a currently adopted region-specific plan for reducing GHG emissions. As discussed under Impact 4.9-1 above, GHG emissions generated by the proposed Project would not surpass the significance threshold of 10,000 metric tons of CO₂e per year. In addition, the operation of the facility is a benefit to Lassen County in that the maintenance of roads and other infrastructure requiring the generation of asphalt pavement and concrete are necessary for support of a safe public transportation system within Lassen County. The generation of pavement material and concrete are required whether located at this facility or other facilities further away. The transportation of materials from facilities further away would result in higher emissions per ton of material produced due to the increased emission from miles traveled by truck. The proposed Project would not conflict with any applicable plans, policies, or regulations adopted for the purpose of reducing the emissions of greenhouse gases. Therefore, impacts would be less than significant in this regard.

4.9.6 Mitigation Measures

No mitigation measures are required.

4.9.7 Level of Significance after Mitigation

No mitigation measures are required. Impacts would be less than significant.

4.10 Hazards and Hazardous Materials

Increasing annual production, extending the life of the mine, and expanding the mining boundary by 78.6 acres will result in minor changes related to Hazards and Hazardous Materials. The proposed quarry expansion will include the same processes and hazardous materials used at the current mining operation within the expansion area and will not result in changes to hazardous materials used at the existing operation.

This section provides a brief summary of hazards and hazardous materials at the Project site, summarizes the previous CEQA review of hazards and hazardous materials impacts for current mining operations, and includes a discussion of impacts to hazards and hazardous materials of the proposed Project.

4.10.1 Environmental Setting

The current mining operation involves the transport, use, and storage and disposal of hazardous materials such as fuels, lubricants and hydraulic fluids for vehicles and equipment onsite. Hazardous materials onsite also include materials used for cement and asphalt production, and explosives used for blasting. All fuel storage tanks onsite have secondary containment structures. Explosive are handled by a licensed operator and are stored in an ATF-inspected and approved magazine onsite.

The Project site is located within a State Responsibility Area (SRA), an area where the state has financial responsibility for wild land fire protection. Based on the map of *Fire Hazard Severity Zones in the State Responsibility Area in Lassen County*, adopted by the California Department of Forestry and Fire Protection (CAL FIRE) on November 7, 2007, the site is located in a Moderate Fire Hazard Severity Zone.

4.10.2 Regulatory Setting

A hazardous material is 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 irreversible illness; or (2) pose a substantial present or potential hazard to human health and safety, or the environment when improperly treated, stored, transported, or disposed of (22 CCR 5 662.60.10).

Hazardous waste is the subset of hazardous materials that has been abandoned, discarded, or recycled and is not properly contained, including contaminated soil or groundwater with concentrations of chemicals, infectious agents, or toxic elements sufficiently high to increase human mortality or to destroy the ecological environment. If a hazardous material is spilled and cannot be effectively picked up and used as a product, it is considered to be hazardous waste. If a hazardous material site is unused, and it is obvious there is no realistic intent to use the material, it is also considered to be a hazardous waste. Examples of hazardous materials include flammable and combustible materials, corrosives, explosives, oxidizers, poisons, materials that react violently with water, radioactive materials, and chemicals.

Various federal and State agencies exercise regulatory authority over the use, generation, transport, and disposal of hazardous substances. The primary federal agencies that are responsible for overseeing regulations and policies regarding hazardous materials are the Environmental Protection Agency (USEPA), Department of Labor Occupational Safety and Health Administration (OSHA), and the Department of Transportation (DOT).

The primary California state agency with similar authority and responsibility is the California Environmental Protection Agency (Cal-EPA), which may delegate enforcement authority to other local agencies with which it has agreements.

Several laws governing the transport, storage, and use of hazardous materials are governed by these agencies as well as oversight for contaminated sites cleanup. Federal laws and regulations, as well as specific legislation and policies, related to hazards and hazardous materials are summarized below.

Federal

Code of Federal Regulations

Federal regulations applicable to hazardous substances are contained primarily in the Code of Federal Regulations (CFR) Titles 29 (Labor), 40 (Protection of Environment), and 49 (Transportation). The applicable CFR titles include standards and provisions for the protection of workers, the natural and environment, and the general public from the effects associated with the use, storage, and transport of hazardous materials.

Resource Conservation and Recovery Act

The 1976 Federal Resource Conservation and Recovery Act (RCRA) and the 1984 RCRA Amendments regulate the treatment, storage, and disposal of hazardous and non-hazardous wastes. The legislation mandated that hazardous wastes be tracked from the point of generation to their ultimate fate in the environment. This includes detailed tracking of hazardous materials during transport and permitting of hazardous material handling facilities.

The 1984 RCRA amendments provided the framework for a regulatory program designed to prevent releases from underground storage tanks (USTs). The program establishes tank and leak detection standards, including spill and overflow protection devices for new tanks. The tanks must also meet performance standards to ensure that the stored material will not corrode the tanks. Owners and operators of USTs had until December 1998 to meet the new tank standards. As of 2001, an estimated 85 percent of USTs were in compliance with the required standards.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) introduced active federal involvement to emergency response, site remediation, and spill prevention, most notably the Superfund program. CERCLA was intended to be comprehensive in encompassing both the prevention of, and response to, uncontrolled hazardous substances releases. CERCLA deals with environmental response, providing mechanisms for reacting to emergencies and to chronic hazardous material releases. In addition to establishing procedures to prevent and remedy problems, it establishes a system for compensating appropriate individuals and assigning appropriate liability.

State

The primary state agencies that are responsible for overseeing regulations and policies regarding hazardous materials are the California Office of Emergency Services (Cal-OES), California Environmental Protection Agency (Cal-EPA), CalRecycle (formerly the California Integrated Waste Management Board (IWMB), Department of Toxic Substances Control (DTSC), California Department of Transportation (Caltrans), California Highway Patrol (CHP), California Regional Water Quality Control Boards (RWQCB), and the California Air Resources Board (CARB). Several laws governing the generation, transport, and disposal of hazardous materials are administered by these agencies. State laws and regulations that are applicable to hazards and hazardous materials are presented below.

Hazardous Materials Management

The California Environmental Protection Agency (Cal-EPA) has established regulations governing the use of hazardous materials in the state. Within Cal-EPA, the Department of Toxic Substance Control (DTSC) has primary hazardous materials regulatory responsibility, but can delegate enforcement responsibilities to local jurisdictions that enter into agreements with DTSC, for the generation, transport, and disposal of hazardous materials under the authority of the Hazardous Waste Control Law (HWCL). State regulations applicable to hazardous materials are contained primarily in Title 22 of the CCR. Title 26 of the CCR is a compilation of those chapters or titles of the CCR that are applicable to hazardous materials management.

Also, within the “umbrella” of Cal-EPA, CalRecycle (formerly the California Integrated Waste Management Board (IWMB)) is responsible for protecting the public’s health and safety and the environment through management of the solid waste generated in California. Solid waste regulations are generally enforced through local enforcement agencies (usually county agencies). CalRecycle works in partnership with local government, industry, and the public to reduce waste disposal and ensure environmentally safe landfills. Solid waste management provisions are outlined in the Public Resources Code (PRC), Division 30.

The CHP and the California Department of Transportation (Caltrans) are the enforcement agencies for hazardous materials transportation regulations. The California Department of Industrial Relations, Division of Occupational Safety and Health Administration (Cal/OSHA) standards are more stringent than federal OSHA regulations. Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations in Title 8 of the CCR.

Cal-OES is the state office responsible for establishing emergency response and spill notification plans related to hazardous materials accidents. In addition, Cal-OES regulates businesses by requiring specific businesses to prepare an inventory of hazardous materials, and to prepare risk management plans through the California Accidental Release Prevention Program (Title 19 of the CCR).

The RWQCB regulate surface and groundwater quality according to the provisions of the California Porter-Cologne Water Quality Act, the Toxic Pits Cleanup Act, Underground Tank Law, and federal Clean Water Act. Generally, all petroleum-related sites are handled by the RWQCBs and all underground tank sites are managed by County environmental management agencies. The Project site is located within the jurisdiction of the Lahontan RWQCB (Region 6). The RWQCB can delegate responsibilities, such as underground tank permitting and monitoring, to local jurisdictions, such as Lassen County.

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

In January 1996, Cal-EPA adopted regulations implementing a “Unified Hazardous Waste and Hazardous Materials Management Regulatory Program” (Unified Program). The six elements of the Unified Program are as follows: 1) hazardous waste generators and hazardous waste onsite treatment; 2) underground storage tanks; 3) aboveground storage tanks; 4) hazardous material release response plans and inventories 5) risk management and prevention programs; and 6) Unified Fire Code hazardous materials management plans and inventories. The Unified Program is implemented at the local level by a local agency — the Certified Unified Program Agency (CUPA). The CUPA is responsible for consolidating administration of the six program elements within its jurisdiction. The Lassen County Environmental Health Department is the designated CUPA in the County.

Emergency Response to Hazardous Materials Incidents

To coordinate emergency services provided by local, state, and federal agencies, California has developed an Emergency Response Plan pursuant to the Emergency Services Act. The Plan is administered by the state Office of Emergency Services. Local agencies are required to develop area plans for an organized response to releases of hazardous materials that are dependent on Business Plans submitted by handlers of hazardous materials and waste within that agency's area. Pursuant to California Health and Safety Code, Section 25503(a) and CCR Section 2729, any business handling hazardous material must establish and implement a Hazardous Materials Business Plan. These Business Plans are then submitted to the local administering agency.

California Health and Safety Code

Cal-EPA has established rules governing the use of hazardous materials and the management of hazardous wastes. Many of these regulations are embodied in the California Health and Safety Code. The code includes regulations that govern safe drinking water, substances control, land reuse and revitalization, remediation, restoration, and methamphetamine contaminated cleanups.

California Code of Regulations Title 22 and Title 26

The California Code of Regulations (CCR) Title 22 provides state regulations for hazardous materials, and CCR Title 26 provides regulation of hazardous materials management. In 1996, Cal/EPA established the “Unified Hazardous Waste and Hazardous Materials Management Regulatory Program” (Unified Program) which consolidated the six administrative components of hazardous waste and materials into one program.

California Department of Forestry and Fire Protection

CAL FIRE protects the people of California from fires, responds to emergencies, and protects and enhances forest, range, and watershed values providing social, economic, and environmental benefits to rural and urban citizens. The Office of the State Fire Marshal supports CAL FIRE's mission by focusing on fire prevention. It provides support through a wide variety of fire safety responsibilities including by regulating buildings in which people live, congregate, or are confined; by controlling substances and products which may, in and of themselves, or by their misuse, cause injuries, death, and destruction by fire; by providing statewide direction for fire prevention in wildland areas; by regulating hazardous liquid pipelines; by reviewing regulations and building standards; and by providing training and education in fire protection methods and responsibilities.

California Fire Code

The California Fire Code (CFC) is contained within Title 24, Chapter 9 of the California Code of Regulations. Based on the International Fire Code, the CFC is created by the California Buildings Standards Commission and regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. Similar to the International Fire Code, the CFC and CBC use a hazards classification system to determine the appropriate measures to incorporate to protect life and property.

4.10.3 Previous CEQA Reviews

1981 EIR

The Initial Study prepared in 1980 for the initial Miller's Custom Work operation determined there was no impact related to risk of upset (risk of an explosion or the release of hazardous substance in the event of accident or upset conditions). Human health impacts (creation of any health hazard or exposure of people to potential health hazard) are also listed as no impact. Hazards and Hazardous materials are not specifically discussed in the Significant Environmental Effects of the Proposed Project section of the 1981 EIR. The EIR does contain the following information under the discussion of mitigation measures proposed to minimize significant effects: Any blasting required would be done by individuals who are state licensed, crushing operations will have no contaminants to dispose of, and asphalt and fuel storage tanks would be kept closed at all times, maintained in clean condition, and care taken to avoid spillage or leakage. Any contaminants from hot plant and/or fuel tanks would be contained, removed from the site, or buried.

1997 EIR

Hazardous materials are discussed in the hydrology and water quality section of the 1997 EIR. The potential for the project to introduce hazardous materials into surface and ground water is discussed in the EIR. The 1997 EIR determined project impacts related to hazardous waste/water quality were significant due to an inadequate Spill Prevention Control and Countermeasure (SPCC) plan. The following mitigation measure relating to hazardous materials was included in the 1997 EIR to reduce impacts to less than significant:

- b. The Spill Prevention and Countermeasure Plan shall be revised to meet the approval of the Regional Board including:*
- *A list of hazardous materials to be used and stored onsite*
 - *Plans for the washout basin*
 - *Description of disposal location for water pumped from the secondary containment area*
 - *A Spill Contingency Plan*
 - *Provisions for an onsite Spill Cleanup Kit*
 - *Provisions for employee training on spill prevention and cleanup*

2019 EIR

Hazards and hazardous material impacts of the expansion of the operation to 24 hours was discussed in the 2019 EIR. The project evaluated in the 2019 EIR did not include any changes to hazardous materials. The possible change in the risk of fire starting onsite at night during 24-hour

operations was analyzed and determined to be less than significant. Project-level and cumulative impacts related to hazards and hazardous materials were found to be less than significant. No mitigation measures were required.

4.10.4 Thresholds of Significance

In accordance with CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the project. The following significance thresholds related to *Hazards and Hazardous Materials* have been derived from Appendix G of the CEQA Guidelines:

- *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.*
- *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.*
- *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.*
- *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, create a significant hazard to the public or the environment.*
- *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, the project would result in a safety hazard or excessive noise for people residing or working in the project area.*
- *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.*
- *Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized area or where residences are intermixed with wildlands.*

4.10.5 Impact Analysis

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

Areas of No Project Impact

As required by CEQA Guidelines §15082, the County issued a Notice of Preparation (NOP) on April 28, 2021 that summarized the proposed Project, stated its intention to prepare an EIR, and requested comments regarding the scope and content of the EIR from responsible and trustee agencies. In the course of the County's initial evaluation, certain impacts of the proposed Project were found to not be significant because of the inability of a project of this scope to create such impacts or the absence of project characteristics producing effects of this type. The effects determined not to be significant are not required to be included in primary analysis sections of the DSEIR. As such, the following impacts either are not applicable to the proposed Project or are not reasonably foreseeable and are not addressed further within this section:

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

The proposed Project site is not located within a quarter mile of a school and will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. No impacts would occur in this regard.

- *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, create a significant hazard to the public or the environment.*

Under Government Code Section 65962.5, both the DTSC and the SWRCB are required to maintain lists of sites known to have hazardous substances present in the environment. Both agencies maintain up-to-date lists on their websites. A search of the DTSC and SWRCB lists identified no open cases of hazardous waste violations on the Project site. Therefore, the site is not on a parcel included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (DTSC, 2021; SWRCB, 2021). As a result, implementation of the proposed Project would not create a significant hazard to the public or to the environment and would have no impact.

- *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, the project would result in a safety hazard or excessive noise for people residing or working in the project area.*

The proposed Project is not in the vicinity of an airport and will not expose workers to safety hazards or excessive noise from airports. No impact would occur in this regard.

- *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.*

The 2019 EIR determined that the impacts of traffic from current operations related to emergency access were less than significant. Implementation of the proposed quarry expansion will not result in a change or increase the severity of these impacts. The proposed Project does not involve a use or activity that could interfere with long-term emergency responses or emergency evacuation plans for the area. No new impacts would occur in this regard.

Project Impacts

Impact 4.10-1: Create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials or through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

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

The proposed Project will result in the use of hazardous materials used for the existing mining operation in the 78.6-acre expansion area. The existing mining operation involves the transport, use, and storage and disposal of hazardous materials such as fuels, lubricants and hydraulic fluids for vehicles and equipment onsite. Hazardous materials onsite also include materials used for cement and asphalt production and explosives used for blasting. All fuel storage tanks onsite have secondary containment structures. Explosive are handled by a licensed operator and are stored in an ATF-inspected and approved magazine onsite.

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

The proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. The existing quarry and aggregate processing operation utilize small amounts of fuel and lubricants and is subject to the County's HMBP program, which is regulated by the Lassen County EHD as part of the Certified Unified Program. The program requires the preparation of a document that provides an inventory of hazardous materials onsite, emergency plans and procedures in the event of an accidental release, and training for employees on safety procedures for handling hazardous materials and in the event of a release or threatened release. These plans are routine documents that are intended to disclose the presence of hazardous materials and provide information on what to do if materials are inadvertently released.

There is a business plan on file with the Lassen County EHD which conducts periodic site inspections. Blasting of quarry rock has historically occurred onsite and the frequency of blasting will slightly increase with implementation of the proposed project. Explosive and detonators are not stored onsite and are only onsite when a blast is being set up. Less than significant impacts are anticipated in this regard.

The proposed Project does not include changes to the current storage or use of hazardous materials at the mining operation. Additionally, the operation is required to have the necessary permits from Lassen County EHD for storing hazardous materials. Operations will continue to follow the applicable laws and regulations regarding hazardous material transport, as defined in Section 353 of the California Vehicle Code. Therefore, the level of risk associated with the accidental release of hazardous substances is not considered significant. Onsite operations would be required to continue to use standard operational controls and safety procedures that would avoid and minimize the potential for accidental release of such substances into the environment. Standard practices would be observed such that any materials released are appropriately contained and remediated as required by local, State, and federal law. Implementation of the proposed Project would result in less than significant impacts in this regard. Impacts are considered less than significant in this regard.

Impact 4.10-2: Expose people or structures to a significant risk of loss, injury or death involving wildland fires.

As previously described above, the Project site is located within a State Responsibility Area (SRA), an area where the state has financial responsibility for wild land fire protection and is located in a Moderate Fire Hazard Severity Zone.

Without controls, mining equipment and processes within the expansion area could increase the risk of fire if operated near vegetated areas during the dry season. Vegetation will be removed from mining areas prior to material extraction. The Mine Safety and Health Administration (MSHA) requires implementation of Fire Prevention and Control standards (30 CFR Part 36). These measures are implemented at the current operation and will be required in the expansion area as well. Therefore, the proposed Project will not expose people or structures to a significant risk or loss, injury or death involving wildland fires. Impacts are considered less than significant in this regard.

4.10.6 Mitigation Measures

No mitigation measures are required.

4.10.7 Level of Significance after Mitigation

No mitigation measures are required. Impacts would be less than significant.

4.11 Hydrology and Water Quality

Expansion of the mining boundary to include an additional 78.6 acres is a substantial change that will require major revisions of the previous EIR due to the involvement of potentially new significant environmental effects pertaining to hydrology and water quality or a substantial increase in the severity of previously identified significant effects under CEQA Guidelines §15162.

This section provides a description of the existing hydrology and water quality setting of the site and surrounding area, summarizes the previous CEQA review of hydrology and water quality impacts, and contains an analysis of the hydrology and water quality impacts associated with the proposed quarry expansion.

4.11.1 Environmental Setting

There are no existing natural streams or bodies of water within the boundaries of the proposed expansion area or current mining area. The proposed Project is not located within a 100-year floodplain. The closest bodies of water to the Project site include an unnamed tributary to Secret Creek, Secret Creek, Willow Creek, Eagle Lake Ditch located 375 feet west of the Project site, and Ward Lake located 0.5 miles southwest of the Project site. Willow Creek is approximately 1 mile west of the site and the Susan River is approximately 2 miles south of the site. Site hydrology is shown on Figure 3-5.

The Project site contains several permitted settling basins near the north end of the existing mining area as well as near the entrance to the quarry which were constructed to contain wash water and to collect stormwater runoff from the existing quarry. The quarry site is made up of mostly fractured and weathered rock; therefore, the site is pervious and a majority of stormwater infiltrates. Concentrated stormwater flows are observed only during heavy rain events. The flows within the existing mine area are contained and slowed by berms and benches and ultimately directed into the existing settling basins.

The current mining operation on the Project site does not discharge stormwater. A Notice of Non-Applicability (NONA) for the *General Permit for Storm Water Discharges Associated with Industrial Activities* (NPDES No. CAS000001) was submitted for the current mining operation in 2015. Standard soil erosion control protocols are currently practiced throughout the site include the use of berms, water bars, or rolling dips, rock check dams on roadway ditches, diverting run-on away from stockpile areas, installing stabilizers as necessary (silt fence, wattles, etc.), and directing runoff within quarry to detention ponds.

The Project site is located within the Honey Lake Valley Groundwater Basin, which has been identified as a “low priority basin” by the Department of Water Resources, signifying that it is not currently at risk for overdraft. Within this basin, *Bulletin 118* estimates the total volume of water stored in the upper 100 feet of saturated basin-fill deposits and volcanic-rock aquifers to be 10 million acre-feet. Estimates of groundwater extraction for agricultural, municipal, and industrial, and environmental wetland uses are 51,000, 15,000, and 3,800 acre-feet respectively. Deep percolation from agricultural applied water is estimated to be 14,000 acre-feet.

One onsite groundwater is used by the current operation for wet suppression of onsite dust. The applicant estimates 0 to 6 truckloads of water are currently used per day (4,000 gallons/load) during daytime operations with an average of 4 to 5 loads per day, and 0 to 4 truckloads per day during nighttime operations, with an average of 2 to 3 truckloads, for a total of approximately 38 acre-feet/year. As seen in the groundwater levels for monitored wells in the Project area, found in the Department of Water Resources (DWR) Water Data Library, there is currently no trend or pattern indicating overdraft in the basin.

4.11.2 Regulatory Setting

The following is a description of federal, State, and local environmental laws and policies that are relevant to the CEQA review process for the proposed expansion area.

Federal

Clean Water Act

The Clean Water Act (CWA) is a federal law that protects the nation's surface waters, including lakes, rivers, coastal wetlands, and "waters of the United States." The CWA specifies that discharges to waters are illegal, unless authorized by an appropriate permit. The permits regulate the discharge of dredged and fill materials, construction-related stormwater discharges, and activities that may result in discharges of pollutants to waters of the United States. If waters of the U.S. are located on a site, a project is likely to discharge to them, and if impacts on them are anticipated, the project must obtain a CWA Section 401 Water Quality Certification from the appropriate RWQCB.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) program is administered by the EPA, which delegated oversight in California to the Regional Water Quality Control Boards. The NPDES program provides general permits and individual permits. The general permits are for construction projects that disturb more than one acre of land. The general permit requires the applicant to file a public Notice of Intent (NOI) to discharge stormwater and to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP includes a site map, description of proposed activities, demonstration of compliance with applicable ordinances and regulations, and a description of Best Management Practices (BMPs) that would be implemented to reduce erosion and discharge of construction-related pollutants.

Impaired Waterbodies

The CWA §303(d) and the California's Porter-Cologne Water Quality Control Act (described below) requires the State to establish the beneficial uses of its State waters and to adopt water quality standards to protect those beneficial uses. Section 303(d) establishes a Total Maximum Daily Load (TMDL), which is the maximum quantity of a particular contaminant that a water body can maintain without experiencing adverse effects, to guide the application of State water quality standards. Section 303(d) also requires the State to identify "impaired" streams (water bodies affected by the presence of pollutants or contaminants) and to establish the TMDL for each stream.

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act acts in cooperation with the CWA to establish the State Water Resources Control Board (SWRCB). The SWRCB is divided into nine regions, each overseen by a RWQCB. The SWRCB, and thus each RWQCB, is responsible for protecting California's surface waters and groundwater supplies. The Porter-Cologne Water Quality Control Act develops Basin Plans that designate the beneficial uses of California's rivers and groundwater basins. The Basin Plans also establish narrative and numerical water quality objectives for those waters. Basin Plans are updated every three years and provide the basis of determining waste discharge requirements, taking enforcement actions, and evaluating clean water grant proposals. The Porter-Cologne Water Quality Control Act is also responsible for implementing CWA Sections 401-402 and 303(d) to SWRCB and RWQCBs.

Sustainable Groundwater Management Act

In 2014, California enacted the Sustainable Groundwater Management Act (SGMA; Water Code Section 10720 et seq.). SGMA and related amendments to California law require that all groundwater basins designated as high or medium priority in the DWR California Statewide Groundwater Elevation Monitoring (CASGEM) Program, and that are subject to critical overdraft conditions, must be managed under a new Groundwater Sustainability Plan (GSP) or a coordinated set of GSPs, by January 31, 2020. High or medium priority basins that are not subject to a critical overdraft must be regulated under one or more GSPs by 2022. Where GSPs are required, one or more local Groundwater Sustainability Agencies (GSAs) must be formed to implement applicable GSPs. A GSA has the authority to require registration of groundwater wells, measure and manage extractions, require reports, and assess fees, and to request revisions of basin boundaries, including establishing new subbasins. GSAs were required be formed for high and medium priority basins by June 2017. As described above in the Environmental Setting subsection, the Project site is located within the Honey Lake Valley Groundwater Basin, which has been identified as a "low priority basin" by the Department of Water Resources, signifying that it is not currently at risk for overdraft. Therefore, a GSA is not in affect for the Honey Lake Valley Groundwater Basin.

Local

Standish-Litchfield Area Plan

The *Standish-Litchfield Area Plan*, last amended in 1986, serves as the principal land use planning and policy document for that area of the County. Water quality policies that could be applicable to the Project are listed below.

- Policy 5.A: The supply and quality of Lassen County water resources shall be preserved and protected.
- Policy 5.B: Upon completion of the DWR study, the County shall develop additional measures to ensure and protect the groundwater supply in the Planning area.

Lassen County Groundwater Management Plan

The *Lassen County Groundwater Management Plan* (GWMP) was adopted by the Lassen County Board of Supervisors on March 13, 2007. The GWMP follows the California Water Code (CWC) Sections 107450 et. seq, by using plan components to support groundwater management objectives which in turn meet a countywide groundwater management goal. The GWMP contains the required components from Senate Bill 1938, the voluntary components from Assembly Bill 3030, and contains suggested components from the Department of Water Resources (DWR) Bulletin 118-2003.

The goal of the GWMP is to maintain or enhance groundwater quantity and quality, thereby providing a sustainable, high-quality supply for agricultural, environmental, and urban use into the future that remains protective of the health, welfare, and safety of residents. The GWMP seeks to achieve its goal through the following objectives:

- Maintain and protect historic groundwater uses;
- Minimize the long-term drawdown of groundwater levels;
- Protect groundwater quality;
- Prevent inelastic land surface subsidence from occurring as a result of groundwater pumping;
- Minimize changes to surface water flows and quality that directly affect groundwater levels or quality;
- Minimize the effect of groundwater pumping on surface water flows, quality, seeps and springs, and natural vegetation;
- Facilitate groundwater replenishment and cooperative management projects;
- Maintain springs, seeps, and riparian habitat; and
- Provide a mechanism for mutual management of interstate groundwater basins with Washoe County and the State of Nevada.

4.11.3 Previous CEQA Reviews

1981 EIR

The 1981 EIR included a discussion of the hydrology and water quality impacts of the initial Millers' Custom Work, Inc., mining operation (excavation, crushing, stockpiling, and hauling of materials as well as the operation of asphalt concrete batch plant). Hydrology and water quality impacts were determined to be potentially significant. The need for a water source for aggregate washing at the crusher site was included in the discussion of significant environmental impacts. Daily water use was anticipated to not exceed 10,000 gallons. In conjunction with a washing operation, water reclamation/discharge plans were determined to be required.

The 1981 EIR includes settling ponds for reclamation and drainage controls for wastewater discharged from gravel/aggregate washing operations in the mitigation measures discussion of the EIR. The plant would be sloped for drainage to water reclamation ponds. Hydrology and water quality impacts were determined to be less than significant with mitigation.

1997 EIR

Water quality impacts of the currently permitted operation were evaluated in the 1997 EIR. The 1997 EIR analyzed the water quality, hazardous waste, and drainage impacts of the onsite production of ready-mix concrete, increase in the height of the exposed rock quarry face, and increase in harvest volume to 1,700,00 cubic yards, and expansion of the season of operation from seven months to year round.

The 1997 EIR determined that water quality, hazardous waste, and drainage impacts of the project were potentially significant. The 1997 EIR contained the following mitigation measures to reduce hydrology/water quality impacts to a less than significant level:

Adherence to California Regional Water Quality Control Board Conditions. The applicant shall fully comply with Regional Board requirements prior to continued operation of the concrete plant, including:

- a. *Implement the following on site and submit plans for washout basin to the Regional Board and detailed overall mining site drainage plans which must include:*
 - *Segregation of process water from stormwater runoff.*
 - *Pretreatment (sediment, oil/grease removal) of stormwater runoff containing pollutants prior to discharging to percolation/containment basins. Precast sand/oil interceptors may be an acceptable means for providing pretreatment of stormwater runoff.*
 - *Pretreatment of stormwater runoff from areas subject to hydrocarbon deposition (fueling areas, parking areas, heavy equipment storage areas). Precast drop inlets with inverted outlet and hydrocarbon absorbent pillows may be an acceptable means for hydrocarbon removal.*
 - *Provide non-percolation containment (such as lined evaporation ponds) for process water runoff.*
 - *Diversion of non-impacted runoff (runoff from upland areas) around areas of industrial activities. Provide diversionary structures (earthen berms, culvers) as necessary to minimize contact with industrial activities.*
- b. *The SPCC Plan shall be revised to meet the approval of the Regional Board including:*
 - *A list of hazardous materials to be used and stored onsite*
 - *Plans for the washout basin*
 - *Description of the disposal location for water pumped from the secondary containment area*
 - *A Spill Contingency Plan*
 - *Provisions for an onsite Spill Cleanup Kit*
 - *Provisions for employee training on spill prevention cleanup*
- c. *Dust control measures (as required in the Air Quality Chapter of the 1997 EIR) to minimize degradation of surface waters from the deposition of fugitive dust.*
- d. *Obtain and provide evidence of proper documentation/application/approval related to the Nation Pollutant Discharge Elimination permit system.*

2019 EIR

In the Initial Study prepared for current mining operation, the County determined that impacts to hydrology and water quality would not result from the project since there is no proposed change to the location, type of mining, drainage/sediment ponds or onsite structures. The current operation is subject to Conditions 4 and 5 of Resolution No. 97-067 requiring all necessary permits from the Lahontan Regional Water Quality Control Board (RWQCB) and State Water Resources Board as well as a SPCC plan approved by the RWQCB. The project could result in increased groundwater use for dust suppression onsite. However, based on worst-case scenario water use calculations conducted by the County, the maximum water use of the project will have a less than significant impact on groundwater supplies. Therefore, additional analysis beyond that contained in the EIR documents from 1981 and 1997 for currently permitted operations was not necessary and an analysis was not included in the 2019 EIR.

4.11.4 Thresholds of Significance

In accordance with CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the project. The following significance thresholds related to *Hydrology and Water Quality* have been derived from Appendix G of the CEQA Guidelines:

- *Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.*
- *Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.*
- *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 addition of impervious surfaces, in a manner which would:*
 - i. Result in substantial erosion or siltation on- or off-site;*
 - ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or offsite;*
 - iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or*
 - iv. Impede or redirect flood flows.*
- *Result in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.*
- *Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.*

4.11.5 Impact Analysis

The proposed Project will alter the existing drainage pattern of the quarry expansion site as mining and reclamation activities occur, however, the proposed expansion area does not contain any natural streams or rivers. The proposed Project does not include any change to the existing sediment ponds or existing onsite structures. The proposed Project could result in a slight increase in groundwater use for dust suppression.

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

Areas of No Project Impact

As required by CEQA Guidelines §15082, the County issued a Notice of Preparation (NOP) on April 28, 2021 that summarized the proposed Project, stated its intention to prepare an EIR, and requested comments regarding the scope and content of the EIR from responsible and trustee agencies. In the course of the County's initial evaluation, certain impacts of the proposed Project were found to not to be significant because of the inability of a project of this scope to create such impacts or the absence of project characteristics producing effects of this type. The effects determined not to be significant are not required to be included in primary analysis sections of the DSEIR. As such, the following impacts either are not applicable to the proposed Project or are not reasonably foreseeable and are not addressed further within this section:

- *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 addition of impervious surfaces, in a manner which would impede or redirect flood flows.*

There are no rivers or streams within the Project site. The proposed Project is not located within or immediately adjacent to a designated floodplain and as a result the proposed quarry expansion will not impede or redirect flood flows. No impact would occur in this regard.

- *Result in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.*

The Project site and the immediate surrounding area is not located within a flood hazard zone, tsunami, or seiche zone. The proposed quarry expansion will not be inundated by water from flooding, tsunami or seiche. There is no risk of release of pollutants due to inundation of the site. No impact would occur in this regard.

Project Impacts

Impact 4.11-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.

The proposed quarry expansion does not include additional pollutant sources or changes to the management of stormwater or wash water. Best Management Practices (BMPs) for pollution prevention are included in the Reclamation Plan. These include proper operating procedures of asphalt and concrete ready-mix plant allowing for covering of conveyors if needed. Hydrocarbons are stored per the site SPCC plan in double-walled containers.

The current mining operation retains all surface flow (stormwater) onsite. Stormwater from the expansion area will be conveyed to the existing retention ponds and additional retention ponds will be constructed to capture stormwater if needed as expansion advances. Ponds will be sized to meet the 25-year, 24-hour storm per the Industrial General Permit (IGP) and SMARA requirements. No discharge is anticipated from the expansion area.

The existing operation includes gravel/aggregate washing. Water discharged from the gravel/aggregate washing operations onsite are retained in settling ponds. The proposed Project will not result in changes to wash water management. The proposed quarry expansion is subject to Conditions 4 and 5 of Resolution No. 97-067, requiring all necessary permits from the Lahontan RWQCB and/or the State Water Resources Board be secured and a SPCC plan for fuel storage be approved by the RWQCB. Therefore, impacts to surface and groundwater quality are considered to be less than significant.

Impact 4.11-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

Well water is used by the current operation for wet suppression of onsite dust as described in the Setting section above. The quarry expansion could increase the groundwater use for dust suppression since the acreage of the mining area will increase by 78.6 acres. In addition, the operation of off-road equipment will increase to support the increase in annual production. The Project will result in an estimated 50 percent increase in annual operational hours of the majority of off-road equipment. Therefore, a maximum water use increase of 50 percent for dust suppression could occur (increase from 38 acre-feet per year to 57 acre-feet per year)

The Project site is located within the Honey Lake Valley Groundwater Basin, which is not currently at risk for overdraft. Estimated total water stored in the upper 100 feet of aquifer is estimated to be 10 million acre-feet. Estimates of groundwater extraction for agricultural municipal and industrial and environmental wetland uses are 51,000, 15,000, and 3,800 acre-feet respectively. Deep percolation from agricultural-applied water is estimated to be 14,000 acre-feet. As seen in the groundwater levels for monitored wells in the Project area, found in the Department of Water Resources (DWR) Water Data Library, there is currently no trend or pattern indicating overdraft in the basin. Therefore, the proposed quarry expansion will not substantially decrease groundwater supplies or interfere substantially with groundwater recharge. Impacts to groundwater supplies are considered to be less than significant.

Impact 4.11-3: 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 addition of impervious surfaces, in a manner which would:

- i. Result in substantial erosion or siltation on- or off-site.*

The proposed quarry expansion site does not include alteration of the course of a stream or river or include the addition of impervious surfaces; however, the expansion will alter the existing

drainage pattern of the mining area. Erosion control BMPs contained in the Reclamation Plan Amendment include use of berms, water bars, or rolling dips, diverting run-on from stockpile areas, planting vegetation/installing stabilizers as necessary, and retention of all stormwater runoff within quarry to settling ponds.

All stormwater within the existing mining area is retained onsite. A Notice of Non Applicability (NONA) was filed in 2015 for the current operation. Surface water within the expansion area will be directed toward the existing settling ponds, and additional ponds will be constructed as required to contain the stormwater as expansion progresses. Erosion or siltation will not be conveyed offsite by stormwater. Impacts are considered less than significant in this regard.

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

See response to item i) above. Stormwater currently does not leave the Project site. The ponds onsite are sized to contain the maximum historic precipitation events. Ponds will be added or expanded as necessary as the mining area increases to contain the maximum historic precipitation event. As a result, implementation of the proposed quarry expansion will not result in flooding on-or-offsite. Impacts are considered less than significant in this regard.

- 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.*

The proposed expansion area is 78.6 acres. If necessary, additional retention ponds will be constructed to capture surface flow as expansion advances. Ponds will be sized to meet the 25-year, 24-hour storm per the IGP and SMARA requirements. Impacts are considered less than significant in this regard.

Impact 4.11-4: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

The Project site borders the area covered by the Lassen County GWMP and is partially within the Plan area. As discussed under the impacts above, Project water use will not result in a drawdown of ground water levels or result in degradation of water quality. The proposed Project will not conflict with or obstruct the Lassen County GWMP. The current mining operation contains all stormwater flows within the mining boundary. Stormwater within the expansion area will also be contained within the mining area of the Project and will not discharge to surface water. The proposed quarry expansion will not conflict with or obstruct the Water Quality Control Plan (WQCP) for the Lahontan Region. Impacts will be less than significant in this regard.

4.11.6 Mitigation Measures

No mitigation measures are required.

4.11.7 Level of Significance after Mitigation

No mitigation measures are required. Impacts would be less than significant.

4.12 Land Use and Planning

Expansion of the mine boundary, increasing annual production, and increasing the life of the mine to 2050 are substantial changes proposed in the Project that will require major revisions of the previous EIR due to the involvement of potentially new significant environmental effects pertaining to land use and planning or a substantial increase in the severity of previously identified significant effects under CEQA Guidelines §15162.

This section provides a description of the existing land use of the Project site and surrounding area, summarizes the previous CEQA review of land use and planning impacts of the currently permitted operation at the Project site, and describes the changes to those conditions that will result from the proposed quarry expansion.

4.12.1 Environmental Setting

The Project site is located in Lassen County and within the area covered by the *Standish-Litchfield Area Plan*. The *Standish-Litchfield Area Plan* extends from the north shore of Honey Lake to the toe slopes of Shaffer Mountain. The portion of the Project site currently used for mining and processing operations is zoned U-C-2 (Upland Conservation/Resource Management District). The proposed 78.6-acre quarry expansion area is zoned U-C-A-P (Upland Conservation District Agricultural Preserve Combining District). Lands immediately adjacent to the Project are zoned O-S (Open Space District); U-C (Upland Conservation District); and A-2-B-20-A (Agricultural Residential 20-Acre Building Site, Agricultural Combining District).

The *Standish-Litchfield Area Plan* classifies these surrounding lands as “Extensive Agriculture”, “Open Space”, and “Agricultural Residential.” The area surrounding the site is primarily used for agriculture and open space. The nearest residence is approximately 875 feet from the western property line of the existing mining boundary and 4,500 feet from the proposed expansion area boundary. The zoning and land use designation of the site and adjoining properties are provided in Table 4-20, below.

Table 4-20 ZONING AND LAND USE OF PROJECT SITE AND ADJOINING PROPERTIES		
Direction	Zoning	General Plan Land Use Designation
Project Site	U-C-2, U-C-A-P	Extensive Agriculture
North	O-S U-C	Open Space (Public Lands) Mountain Resort (Belfast Initiative Area)
East	O-S	Open Space (Public Lands)
South	O-S	Open Space (Public Lands)
West	U-C A-2-B-20-A	Extensive Agriculture Agricultural Residential
Source: Lassen County, 2021.		

4.12.2 Regulatory Setting

The following is a description of local environmental laws and policies that are relevant to the CEQA review process for the proposed quarry expansion area.

Local

Lassen County General Plan

The *Lassen County General Plan* was adopted in September 1999. The General Plan contains a Land Use Element, Natural Resources Element, Agriculture Element, Wildlife Element, Open Space Element, Circulation Element, and Safety and Seismic Safety Element.

The Land Use Element of the General Plan designates the proposed general distribution and intensity of uses in the land for housing, business, industry, open space, natural resources, public facilities, waste disposal sites, and other categories of public and private uses. The Land Use Element is intended to serve as the central framework for the entire General Plan, and to correlate all land use issues into a set of coherent development policies. The following goals, policies, and implementation measures related to land use contained in the *Lassen County General Plan* are applicable to the proposed Project:

GOAL L-4: Compatibility between land use types by providing for complementary mixtures of patterns and land uses and maintain compatibility of land uses within the context of the County's land use authority and local control.

- Policy LU-6: The County recognizes general plan land use designations and consistent zoning as the appropriate and primary tools for attempting to achieve.
- Policy LU-7: The County shall consider the land use compatibility implications of proposed changes in land use, including proposed general plan amendments and rezoning, to determine the significance and acceptability of the extent to which proposed changes may affect the pattern and well-being of neighboring land uses.

GOAL L-13: Improvement, expansion and diversification of the County's industrial base and generation of related employment opportunities.

- Policy LU-32: The County encourages and will facilitate the development of new, environmentally responsible industrial projects for the economic benefit of the County.
- Policy LU-33: In considering proposals for new industrial sites, including amendments of the County General Plan and related rezoning, the County will address the compatibility of the site with established land use patterns, the adequacy of infrastructure and services, and the consistency of new sites with policies related to Lassen County General Plan Land Use Element the protection of natural resources as addressed in relevant sections of the General Plan.
- Policy LU-34: The County supports the development of industrial land uses primarily in or adjacent to areas which have been designated and developed for such uses and which have or can develop the necessary infrastructure to serve such uses, while recognizing that some types of resource-related industrial uses and processing plants may require or otherwise warrant relatively remote sites which are removed from standard industrial areas.
- Policy LU-35: Subject to case-by-case review (including review for compatibility with surrounding agricultural uses), and in compliance with relevant area plan, zoning,

permitting and environmental review requirements, the development and operation of the following land uses will typically be deemed to be consistent with the Extensive and Intensive Agriculture land use designations and will not require zoning to an “Industrial” zoning district, nor will they be interpreted by the County to constitute an “agricultural conversion” pursuant to this General Plan:

- processing plants for the production of agricultural products;
- processing plants for the production of natural resource products where the location of the resource is fundamental to the location of processing and packaging facilities (e.g., water bottled at the source, etc.);
- mines, the extraction of minerals, and the ancillary processing of mineral materials generated onsite, including the production of asphalt, ready-mix concrete, and similar products;
- sawmills and related timber processing operations;
- geothermal and natural gas wells, hydroelectric projects, and ancillary facilities for the production of energy; and
- uses of similar character as may be determined by the Board of Supervisors.

GOAL L-16: Conservation of productive agricultural lands and lands having substantial physical potential for productive agricultural use, and the protection of such lands from unwarranted intrusion of incompatible land uses and conversion to uses which may significantly obstruct or constrain agricultural use and value.

- Policy LU-40: The County recognizes and has generally assigned General Plan land use designations for lands having high agricultural resource value as “Intensive Agriculture” or “Crop Land and Prime Grazing Land”. It also recognizes the potentially important agricultural values of some of the areas designated “Extensive Agriculture” or “Grazing and Sagebrush Environment” for rangeland grazing and other agricultural purposes.

GOAL L-22: Protection and enhancement of important wildlife habitats to support healthy, abundant, and diverse wildlife populations.

- Policy LU-49: The County supports the management and enhancement of wildlife resources in ways that enhance the health and abundance of wildlife populations and the diversity of species and their habitats and which, at the same time, balance management policies and program objectives with the range of social and economic needs for which the County is also responsible.

GOAL L-16: Conservation of productive agricultural lands and lands having substantial physical potential for productive agricultural use, and the protection of such lands from unwarranted intrusion of incompatible land uses and conversion to uses which may significantly obstruct or constrain agricultural use and value.

- Policy LU-40: The County recognizes and has generally assigned General Plan land use designations for lands having high agricultural resource value as “Intensive Agriculture” or “Crop Land and Prime Grazing Land”. It also recognizes the potentially important agricultural values of some of the areas designated “Extensive Agriculture” or “Grazing and Sagebrush Environment” for rangeland grazing and other agricultural purposes.

1986 Standish-Litchfield Area Plan

The *Standish-Litchfield Area Plan* was adopted in 1986 and was intended to guide decisions regarding land use for an approximate 20-year timeframe. In the plan, it is stated, “The plan is long-range in nature and should be reviewed every five years to determine whether it still reflects community values.” The Area Plan contains three categories: Environmental Safety, Natural and Cultural Resources, and Community Development. It has been more than 20 years since the Area Plan has been adopted; however, since there have not been any updates since 1986, the goals, policies, and implementation measures are still applicable to the proposed Project.

4.12.3 Previous CEQA Reviews

1981 EIR

The 1981 EIR does not include a specific analysis of the land use impacts of the initial mining operation at the site (excavation, crushing, stockpiling, and hauling of materials as well as the operation of asphalt concrete batch plant).

1997 EIR

Land use impacts of the operation prior to expansion to 24-hour operations were evaluated in the 1997 EIR. The project analyzed in the EIR included rezoning the project site parcel from U-C (Upland Conservation District) to U-C-2 (Upland Conservation/Resource Management) to allow operation of a ready-mix concrete plant upon approval of a use permit. The EIR determined that due to compatibility issues with the *Standish-Litchfield Area Plan* (the Area Plan does not allow secondary processing, such as the production of ready-mix concrete), land use impacts were determined to be potentially significant. The 1997 EIR contained the following mitigation measures to reduce land use impacts to a less than significant level:

- *Land Use Compatibility. Implementing the mitigation measures recommended for individual impacts identified in other section of the EIR will concurrently mitigate any land use impacts.*
- *Conflict with Adopted Land Use Plans and Regulations.*
 - a) *Redesign the project to eliminate the proposed ready-mix concrete plant to avoid conflict with adopted area plan policies and zoning; or*
 - b) *Amend the area plan goal and policy to allow production of ready-mix concrete on approved mine sites within the planning area where allowed by the zoning, and subsequently rezone the site to a zoning district that allows for such production.*

2019 EIR

Land use impacts of the existing operation were analyzed in the 2019 EIR. The expansion of operations to 24 hours and increase in production was determined to have the potential to conflict with goals, policies, and implementation measures related to land use contained in the *Lassen County General Plan* and *Standish-Litchfield Area Plan* (specifically, those related to traffic/circulation and protection of wildlife habitat). Mitigation measures included those contained in the Biological Resources section of the 2019 EIR.

Goal L-22 contained in the General Plan Land Use Element is “Protection and enhancement of important wildlife habitats to support healthy, abundant and diverse wildlife populations.” With implementation of biological resource mitigation measures, the project evaluated in the 2019 EIR was found not to conflict with Goal L-22 of the *Lassen County General Plan* Land Use Element. Project-level and cumulative impacts to land use, after implementation of the mitigation measures were found to be less than significant.

4.12.4 Thresholds of Significance

In accordance with CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the project. The following significance thresholds related to *Land Use and Planning* have been derived from Appendix G of the CEQA Guidelines:

- *Physically divide an established community.*
- *Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.*

4.12.5 Impact Analysis

The proposed Project includes expansion of the existing mining operation by an additional 78.6 acres, an increase in processing volume from 100,000 tons per year to 200,000 tons per year, and extension of the life of the mine to 2050. The expansion area includes undeveloped land to the north of the existing mining boundary. The proposed quarry expansion will not physically divide an established community.

The consistency of the proposed Project with applicable goals and policies contained in the *Lassen County General Plan* and *Standish-Litchfield Area Plan* is addressed below. The discussion is limited to the applicable goals, policies, and implementation measures contained in or referenced in the Land Use Element of the *Lassen County General Plan* or related to Land Use in the *Standish-Litchfield Area Plan*. The goals and policies contained in the Lassen County Noise Element are addressed separately in Section 4.13, *Noise*.

Note that it is nearly, if not absolutely, impossible for a project to be in perfect conformity with each and every policy set forth in any given applicable plan. It is enough that the proposed project will be compatible with the objectives, policies, general land uses, and programs specified in the applicable plan. *Pfeiffer v. City of Sunnyvale City Council*, 200 Cal.App.4th 1552, 1563, 135 Cal. Rptr. 3d 380 (2011) (*Crenshaw Subway Coal. v. L.A. Cnty. Metro. Transp. Auth.* (C.D.Cal. Sep. 23, 2015, No. CV 11-9603 FMO (JCx)) 2015 U.S. Dist. LEXIS 143642, at *66.)

The following includes an analysis of environmental parameters related to *Land Use and Planning* based on Appendix G of the CEQA Guidelines. The discussion not only includes the areas for which there is potential for environmental impacts but also provides justification for the conclusions that either no impacts, less than significant impacts, or less than significant impacts

with mitigation could occur. The CEQA Checklist question, discussion, and environmental significance conclusions are provided below under each individual environmental parameter related to *Land Use and Planning*.

Areas of No Project Impact

As required by CEQA Guidelines §15082, the County issued a Notice of Preparation (NOP) on April 28, 2021 that summarized the proposed Project, stated its intention to prepare an EIR, and requested comments regarding the scope and content of the EIR from responsible and trustee agencies. In the course of the County's initial evaluation, certain impacts of the proposed Project were found to not to be significant because of the inability of a project of this scope to create such impacts or the absence of project characteristics producing effects of this type. The effects determined not to be significant are not required to be included in primary analysis sections of the DSEIR. As such, the following impacts either are not applicable to the proposed Project or are not reasonably foreseeable and are not addressed further within this section:

- *Physically divide an established community.*

The proposed Project is consistent with the existing *Lassen County General Plan* designation and zoning of the site. The proposed Project does not have the potential to physically divide an established community and does not propose to divide land or rezone the parcels. Access to the site is limited. No impact would occur in this regard.

Project Impacts

Impact 4.12-1: Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

Consistency of the existing permitted operation with local traffic and circulation policies contained in the *Lassen County General Plan* and *Standish-Litchfield Area Plan* was analyzed in the 2019 EIR. Impacts were determined to be less than significant. The proposed quarry expansion does not include additional traffic or a change in the distribution of traffic from the current operation; therefore, would not conflict with local traffic or circulation policies.

The Project site land use designation is "Extensive Agriculture." The proposed quarry expansion does not include any changes in land use designation. Subject to County permit requirements and the provisions of related elements of the *Lassen County General Plan*, areas designated Extensive Agriculture may also accommodate natural resource-related production facilities, including mineral extraction and processing, including asphalt and similar plants. The current mining activities are allowed by Use Permit Amendment No. 2018-003. The proposed Project includes amendments to the Use Permit and Reclamation Plan to allow a 78.6-acre expansion area, increase in processing volume, and extension of the life of the mine.

The *Standish-Litchfield Area Plan* requires the land uses for mineral extraction should be zoned U-C (Upland Conservation District). The proposed quarry expansion area is currently zoned U-C-A-P (Upland Conservation District Agricultural Preserve Combining District). The U-P (Upland Conservation District) is intended to be applied in the mountain and upland foothill areas of the county in which forestry, mining, grazing, and noncommercial recreation are natural and desirable

uses; in which protection of the watershed lands from wildfire, erosion, pollution, and other detrimental effects is essential to the general welfare and in which land divisions will be regulated to ensure compatibility with primary uses. It is further intended that this district will be applied to land areas which are classified by the general plan as containing lands suitable for establishment as agricultural preserves. Processing of natural mineral materials is included as a use allowed by use permit in this zoning district (Lassen County Code Chapter 18.68.040(4)). As discussed above, the proposed Project includes an amendment to Use Permit No. 2018-003 to include the 78.6-acre expansion area, increase in processing volume, and extension of the life of the mine. The proposed Project will not conflict with the land use goals or policies contained in the *Lassen County General Plan* or *Standish-Litchfield Area Plan*.

Wildlife impacts are addressed in Section 4.5, *Biological Resources*, of this DSEIR. Goal L-22 contained in the *Lassen County General Plan* Land Use Element does not contain mention of a specific species or criteria for consistency; however, the Project site does contain critical winter range for pronghorn and mule deer and potential habitat for special-status species. The impacts of the proposed quarry expansion to pronghorn and mule deer and special-status species are discussed in Section 4.5, *Biological Resources*. This impact will be significant without mitigation. Implementation of Mitigation Measures 4.5-1 through 4.5-10, will ensure that the proposed Project will not conflict with the land use policies contained in the *Lassen County General Plan* or *Standish-Litchfield Area Plan*. Following implementation of these measures, the proposed Project is considered substantially consistent with the *Lassen County General Plan* and the *Standish-Litchfield Area Plan*. Impacts are considered less than significant in this regard.

4.12.6 Mitigation Measures

Implement Mitigation Measure 4.5-9 and Mitigation Measure 4.5-10 in Section 4.5, *Biological Resources*.

4.12.7 Level of Significance after Mitigation

Less than significant impact with mitigation incorporated.

4.13 Noise

Expansion of the mine boundary, extending the life of the mine and increasing the maximum annual production volume of the mine from 100,000 tons to 200,000 tons are substantial changes proposed to the currently permitted Project that will require revisions of the previous EIR due to the involvement of potentially new significant environmental effects pertaining to noise generated from the expanded operational activities.

This section provides a description of the existing noise setting within the Project area, summarizes the previous CEQA analyses of the noise impacts, and describes the changes to those conditions that will result from implementation of the proposed quarry expansion. Information about existing noise levels at the Project site is based on information contained in the *Hat Creek Materials Facility Expansion Revised Environmental Noise Analysis* prepared by j.c. brennan & associates, Inc. for the facility expansion that occurred in 2019. The noise analysis is included as Appendix H.

4.13.1 Fundamentals of Noise

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called “sound.” The number of pressure variations per second is called the “frequency of sound” and is expressed as “cycles per second” or “Hertz” (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected, or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as “dBA”) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels, but are expressed as “dB” unless otherwise noted.

The decibel scale is logarithmic, not linear. In other words, two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70 dBA sound is half as loud as an 80 dBA sound, and twice as loud as a 60 dBA sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool is the average, or equivalent, sound level (Leq), which corresponds to a steady-state A-weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The Leq is the foundation of the composite noise descriptor, Ldn, and shows very good correlation with community response to noise.

The day/night average level (Ldn) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because Ldn represents a 24-hour average, it tends to disguise short-term variations in the noise environment.

Table 4-21 lists several examples of the noise levels associated with common situations. Appendix A of the Noise Analysis provides a summary of acoustical terms used in this report.

Table 4-21 TYPICAL NOISE LEVELS		
Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft)	--100--	
Gas Lawn Mower at 1 m (3 ft)	--90--	
Diesel Truck at 15 m (50 ft), At 80 km/hr. (50 mph)	--80--	Food Blender at 1 m (3 ft) Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m(100 ft)	--70--	Vacuum Cleaner at 3 m (10 ft)
Commercial Area, Heavy Traffic at 90 m (300 ft)	--60--	Normal Speech at 1 m (3 ft)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing
Source: Caltrans, <i>Technical Noise Supplement, Traffic Noise Analysis Protocol</i> , November 2013.		

Effects of Noise on People

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction.
- Interference with activities such as speech, sleep, and learning.
- Physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A

wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called "ambient noise level." In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it.

With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- Outside of the laboratory, a 3 dBA change is considered a just-perceivable difference;
- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10 dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6 dB per doubling of distance from the source, depending on environmental conditions (i.e., atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Soft sites attenuate at 7.5 dB per doubling of distance because they have an absorptive ground surface such as soft dirt, grass, or scattered bushes and trees (Caltrans, 1998). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

Vibration

Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that noise is generally considered to be pressure waves transmitted through air, while vibration is usually associated with transmission through a structure. As with noise, vibration consists of an amplitude and frequency. A person's response to vibration will depend on their individual sensitivity as well as the amplitude and frequency of the source.

Vibration can be described in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities (inches/second). Standards pertaining to perception as well as damage to structures have been developed for vibration in terms of peak particle velocity (ppv). Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events.

4.13.2 Environmental Setting

The Project site includes the existing quarry as well as 78.6 acres of undeveloped land located immediately north of the existing quarry. The existing quarry includes a materials excavation and crushing operation, recycled asphalt and concrete crushing, and an asphalt batch plant. Operating hours are typically 6:00 a.m. to 7:00 p.m. During peak operations, the facility operates 24 hours per day and up to 550 truck trips (275 arriving and 275 departing) occur to haul material to

construction project sites. Peak periods of operations are considered limited to emergency situations to meet Caltrans contracting requirements.

Noise data for quarry operations at the Project site were included in the 2019 Noise Analysis and 2019 EIR and are representative of current existing ambient noise levels of plant operations (refer to Appendix H). Information on existing ambient noise levels included in the 2019 Noise Analysis and 2019 EIR is included below. Peak truck traffic volumes were not occurring during noise data collection.

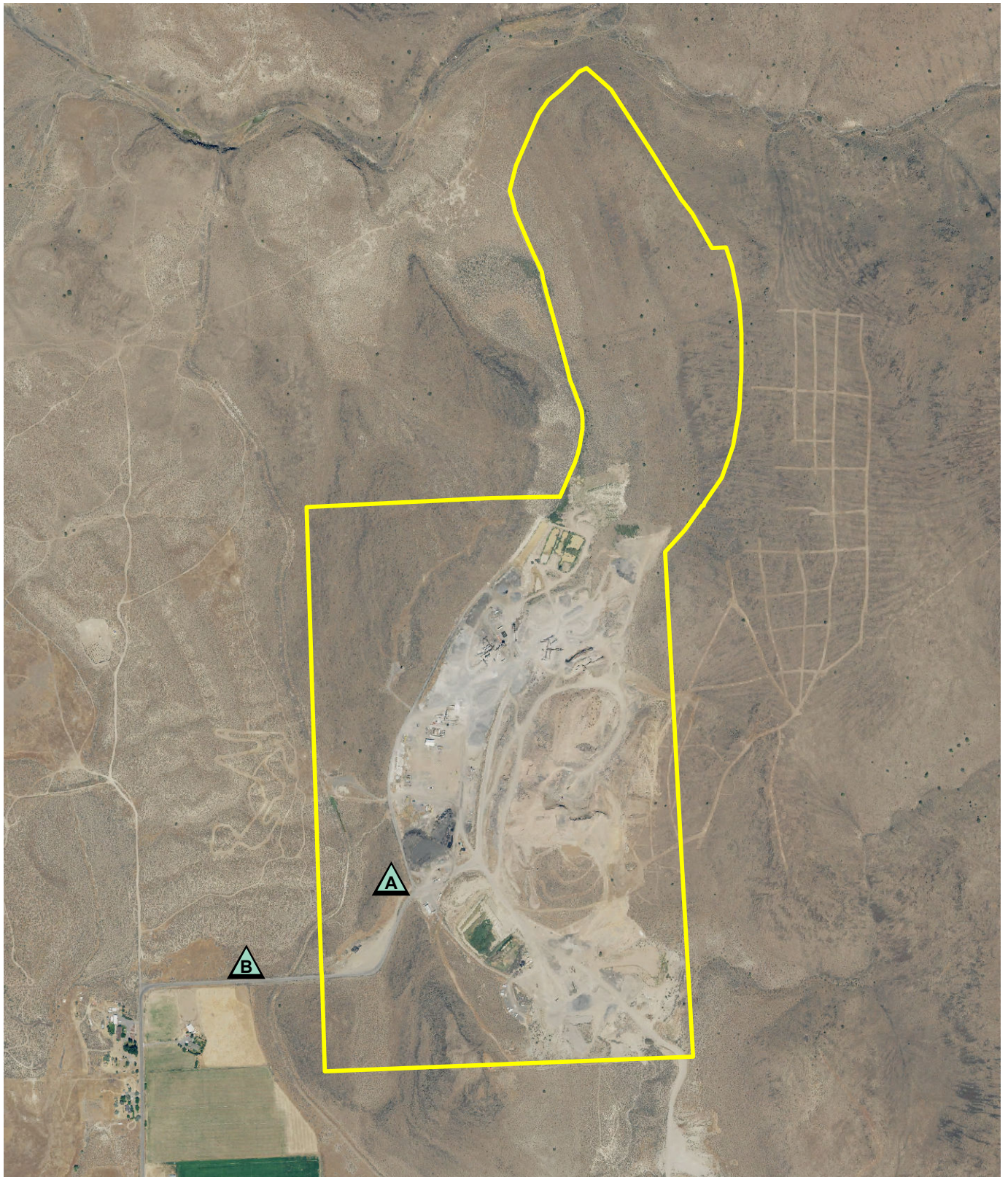
During noise data collection on May 3rd and May 4, 2018, two shifts were operating from 6:00 a.m. to midnight. The primary noise sources associated with the existing operations include the following:

- Cement Batch Plant;
- Excavation and Crushing Operations (mobile equipment associated with the operations);
- Cement and Asphalt Batch Plants; and
- Truck Traffic to and from the Site on Area Roadways.

To quantify the existing ambient noise environment in the Project vicinity due to existing operations, j.c. brennan & associates, Inc., conducted continuous hourly noise level measurements for a 24-hour period at two locations. One location was on the Project site and adjacent to the entrance near the office building. The other site was adjacent to Ward Lake Road. The noise level measurements were conducted on Thursday, May 3rd, through Friday, May 4, 2018.

Noise measurement locations are shown on Figure 4-6. A summary of the noise level measurement survey results is provided in Table 4-22. Appendix H contains the *Noise Analysis* prepared for the 2019 EIR including the complete results of the continuous (24-hour) noise monitoring.

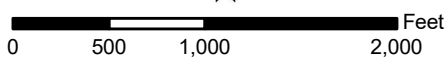
Table 4-22 EXISTING CONTINUOUS BACKGROUND NOISE MEASUREMENT DATA SUMMARY- MAY 3-4, 2018							
Site	Ldn (dBA)	Average Measured Hourly Noise Levels (dBA)					
		Daytime (7:00 a.m.-10:00 p.m.)			Nighttime (10:00 p.m.-7:00 a.m.)		
		Leq	L50	Lmax	Leq	L50	Lmax
Site A-Entrance to the Site and approximately 215-feet from the scales and 1,160 feet from the Concrete Plant, and 1,875 feet from the crushing plant	53.5	49.4	39.0	65.8	46.5	33.1	56.3
		L2	L8	L25	L2	L8	L25
		47.8	45.1	41.9	40.7	38.7	35.9
Site B-35 feet from the Ward Lake Road centerline	55.6	Leq	L50	Lmax	Leq	L50	Lmax
		54.6	32.7	78.7	46.9	26.8	68.0
		L2	L8	L25	L2	L8	L25
		54.6	42.1	35.9	41.5	34.3	29.4
Source: j.c. brennan & associates, Inc., 2019.							



Continuous Noise Measurement Site



Project Site



SOURCE: J.C. BRENNAN & ASSOCIATES, 2018

FIGURE 4-6
NOISE MEASUREMENT LOCATIONS
WARD LAKE QUARRY
LASSEN COUNTY, CALIFORNIA

The sound level meters were programmed to record the maximum, median, and average noise levels at each site during the survey. The maximum value, denoted Lmax, represents the highest noise level measured. The average value, denoted Leq, represents the energy average of all of the noise received by the sound level meter microphone during the monitoring period. The median value, denoted L50, represents the sound level exceeded 50 percent of the time during the monitoring period. In addition, the composite 24-hour average noise level (Ldn) was also calculated from the hourly Leq values. The calculated Ldn for each day applies a +10 dBA penalty to all noise which occurs during the nighttime period, which is defined as the hours between 10:00 p.m. and 7:00 a.m.

Existing Plant Noise Levels

No changes in plant operations have occurred since the Noise Analysis was prepared in 2019. Plant operation noise levels contained in the 2019 Noise Analysis and 2019 EIR are representative of current plant operations. The discussion of existing plant operations noise levels from the 2019 EIR is included below:

On May 3, 2018, j.c. brennan & associates, Inc., staff conducted noise measurements and observations of the Hat Creek Materials individual operations. The noise measurements were conducted with a Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meter, which was equipped with 1/3 octave and 1/1 octave band filters. The equipment was calibrated prior to, and after the measurements with an LDL Model 200 acoustical calibrator to ensure accuracy of the measurement. Octave band data was collected, including the hourly average and maximum noise levels. Statistical noise levels were not collected for each individual piece of equipment. It was determined that the overall noise levels collected at Site B, as shown in Table 4-20, would provide the overall statistical noise levels for the overall operations. The results of the individual operations noise measurements are provided in Table 3 of the *Hat Creek Materials Facility Expansion Revised Environmental Noise Analysis* (refer to Appendix H).

During the noise measurements, the loader operated at the Sand Plant generated noise levels of 66.6 dB Leq and 74.8 dB Lmax at a distance of 100 feet. The cement plant (plant operations and trucks) generated noise levels of 67.7 dB Leq and 87.6 dB Lmax at a distance of 100 feet. Crushing operations (crushers and loaders) were measured to be 85.6 dB Leq and 88.7 dB Lmax at distance of 200 feet. The asphalt plant diesel generator was measured to be 85.6 dB Leq and 87.5 dB Lmax from the center of the site at a distance of 50 feet from the burner and 40 feet from the generator.

Existing Traffic Noise Levels

Traffic noise levels for the current mining operation were estimated in the *Hat Creek Materials Facility Expansion Revised Environmental Noise Analysis* completed for the 2019 EIR (refer to Appendix H). Baseline traffic remains the same as that analyzed in the 2019 EIR with an average of 32 one way truck trips per day during normal operating periods which are evenly distributed from 6:00 to 7:00 p.m. The distribution of truck trips includes 40 percent traveling east on Center Road and 60 percent traveling west on Center Road. Traffic noise levels predicted for the existing operation on an average day are included in Table 4-23.

Table 4-23 PREDICTED TRAFFIC NOISE LEVELS DURING AN AVERAGE DAY				
Roadway	Location	Traffic Noise Level @ 75'*	Distance to Noise Contours	
			55 dBA	60 dBA
Traffic Noise Levels during an Average Day with 32 One-Way Truck Trips (6:00 a.m. to 7:00 p.m.)				
Ward Lake Road	Entire Length	48.3 dBA Ldn	23 feet	10 feet
Center Road (A27)	West of Ward Lake	51.4 dBA Ldn	43 feet	20 feet
Center Road (A27)	East of Ward Lake	48.7 dBA Ldn	28 feet	13 feet
Center Road (A27)	East of Cutoff Road	48.3 dBA Ldn	27 feet	12 feet
Traffic Noise Levels during an Average Day (Peak Hour Daytime Leq)				
Ward Lake Road	Entire Length	46.1 dBA Leq	19 feet	9 feet
Center Road (A27)	West of Ward Lake	52.2 dBA Leq	48 feet	22 feet
Center Road (A27)	East of Ward Lake	50.2 dBA Leq	35 feet	16 feet
Center Road (A27)	East of Cutoff Road	49.7 dBA Leq	33 feet	15-feet
Traffic Noise Levels during an Average Day (Peak Hour Nighttime Leq)				
Ward Lake Road	Entire Length	45.7 dBA Leq	18 feet	8 feet
Center Road (A27)	West of Ward Lake	48.3 dBA Leq	27 feet	12 feet
Center Road (A27)	East of Ward Lake	48.3 dBA Leq	27 feet	12 feet
Center Road (A27)	East of Cutoff Road	46.9 dBA Leq	22 feet	10 feet
Sources: j.c. brennan & associates, Inc., 2019 and FHWA RD-77-108. *- Roadway noise levels are calculated from the roadway centerline.				

During peak operational periods, additional truck trips are required to haul material. Maximum haul truck trips for the existing operation are limited by Use Permit Amendment No. 2018-003. Condition of Approval #8. This condition of approval was included to maintain traffic noise below 65 dB Ldn along area roadways during 24-hour operations. The Condition of Approval states:

"Haul trucks (loaded or empty) associated with the mining operation shall not exceed a daily average of 26 round trips (26 arriving and 26 departing) throughout the calendar year and shall not exceed a daily maximum of 275 round trips (275 arriving and 275 departing) with a maximum of 173 total trips occurring between the hours of 10:00 pm. and 7:00 a.m., excluding personal employee vehicles and light-duty trucks assigned to employees."

Estimated noise levels predicted for existing peak traffic volumes (550 truck trips per day) that occur periodically at the current operation are included in Table 4-24.

Table 4-24 PREDICTED TRAFFIC NOISE LEVELS 550 TRUCK TRIPS PER DAY				
Roadway	Location	Traffic Noise Level @ 75'*	Distance to Noise Contours	
			55 dBA	60 dBA
Traffic Noise Levels with 550 One-Way Truck Trips over a 24-Hour Period (Maximum of 173 Total Trips occurring between the Hours of 10:00 p.m. and 7:00 a.m.)				
Ward Lake Road	Entire Length	64.6 dBA Ldn	328 feet	152 feet
Center Road (A27)	West of Ward Lake	65.0 dBA Ldn	350 feet	162 feet
Center Road (A27)	East of Ward Lake	55.1 dBA Ldn	77 feet	36 feet
Center Road (A27)	East of Cutoff Road	53.9 dBA Ldn	64 feet	30 feet
Sources: j.c. brennan & associates, Inc., 2019 and FHWA RD-77-108. *- Roadway noise levels are calculated from the roadway centerline.				

Existing Materials Facility Noise Levels

Noise levels from the materials facility onsite operations have not changed since preparation of the 2019 EIR. The noise levels contained in the 2019 EIR are included below.

Onsite operations associated with materials facility onsite activities are generally represented by the measured hourly L50 values. During the daytime, the measured hourly background L50 noise levels due to onsite activities ranged between 27 dBA and 44 dBA at Site B, which represents the nearest residence. The average measured hourly L50 value was 33 dBA at Site B.

During the nighttime hours, the materials facility onsite operations resulted in measured background L50 noise levels ranging from 28 dBA to 45 dBA at Site B, while the plant was operating, which represents the nearest residence. (During the noise measurements, the plant operated during the nighttime hours until approximately 12:00 a.m. to 1:00 a.m.). The noisiest hours occurred during the start-up of operations between the hours of 6:00 a.m. and 8:00 a.m. Otherwise, plant operations were represented by the average measured L50 value of 33 dBA.

The noisiest operations associated with the materials facility onsite facilities are the crushing operations and the asphalt plant operations. Startup of onsite generator operations no longer occurs between the hours of 10:00 p.m. and 7:00 a.m.

Overall Measured Background Noise Levels

Background noise levels contained in the 2019 EIR are included below. Noise measurements were conducted when peak haul trips were not occurring.

The overall measured background hourly noise levels at Site B, which represents the nearest residence, ranged between 39 dBA and 61 dBA Leq. This included all background noise sources, including the roadway traffic, Materials Facility onsite operations, aircraft overflights, and neighborhood activities.

The measured 24-hour Ldn at Site B was 55.6 dBA. Maximum noise levels experienced at the nearest residences are due to truck traffic along Ward Lake Road.

4.13.3 Regulatory Setting

The following is a description of local environmental laws and policies that are relevant to the CEQA review process for the proposed expansion area.

Local

Lassen County General Plan

The *Lassen County General Plan* Noise Element includes noise level policies for land use compatibility. The following summarizes the noise policies and criteria applicable to the proposed Project:

GOAL: The overall goals of the Lassen County Noise Element are to protect the citizens of Lassen County from the harmful and annoying effects of exposure to excessive noise, and to

protect the economic base of Lassen County by preventing the encroachment of incompatible land uses within areas affected by existing noise-producing uses.

- Policy N-1: Noise created by locally regulated noise sources associated with new projects or developments shall be controlled so as not to exceed the noise level standards as set forth below as measured at any affected residentially designated lands or land use situated in either the incorporated or unincorporated areas. New residential development shall not be allowed where the ambient noise level due to locally-regulated noise sources will exceed the noise level standards as set forth in Table 4-25. These standards do not apply to residential units established in conjunction with industrial or commercial uses.
- Policy N-2: The compatibility of proposed projects with existing and future noise levels due to traffic on public roadways, railroad line operations, and aircraft in flight shall be evaluated by comparison to the current site layout.
- Policy N-3: Areas within Lassen County shall be defined as noise-impacted if exposed to existing or projected exterior noise levels exceeding either 60 dB Ldn/CNEL or the performance standards summarized in Table 4-25, below.
- Policy N-8: Noise produced by industrial uses shall not exceed 70 dB Ldn at the nearest property line.

Table 4-25 LASSEN COUNTY GENERAL PLAN NOISE LEVEL PERFORMANCE STANDARDS FOR NEW PROJECTS AND DEVELOPMENTS				
Category	Cumulative No. of Minutes in Any 1-Hr Time Period	Exterior Noise Level Standard, dBA		
		Interpretation	Daytime (7:00 a.m.-10:00 p.m.)	Nighttime (10:00 p.m.-7:00 a.m.)
1	30	L50	50	40
2	15	L25	55	45
3	5	L8	60	50
4	1	L1.5	65	55
5	0	Lmax	70	60
Note: Each of the noise level standards specified above shall be reduced by 5 dBA for simple tone noise sources, noises consisting primarily of speech or music, or for recurring impulsive noises.				

CEQA Guidelines define a significant impact of a project if it “increases substantially the ambient noise levels for adjoining areas.”

The information summarized in Table 4-25 is based upon recommendations made in August 1992 by the Federal Interagency Committee on Noise (FICON) to provide guidance in the assessment of changes in ambient noise levels resulting from aircraft operations. The recommendations are based upon studies that relate aircraft noise levels to the percentage of persons highly annoyed by the noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, it has been asserted that they are applicable to all sources of noise described in terms of cumulative noise exposure metrics such as the Ldn.

Table 4-26 DETERMINATION OF A SIGNIFICANT INCREASE IN NOISE LEVELS	
Ambient Noise Level Without Project, Ldn/CNEL	Increase Required for Significant Impact
<60 dBA	+ 5.0 dB or more
60-65 dBA	+ 3.0 dB or more
>65 dBA	+1.5 dB or more
Source: FICON, August 1992	

Based upon the Table 4-26 criteria, an increase in the traffic noise level of 1.5 dB or more would be significant where the ambient noise level exceeds 65 dB Ldn. The rationale for the Table 4-26 criteria is that, as ambient noise levels increase, a smaller increase in noise resulting from a project is sufficient to cause significant annoyance.

There are no federal, State, or local regulatory standards for ground-borne vibration. However, various criteria have been established to assist in the evaluation of vibration impacts. Caltrans has developed criteria for human and structural response to vibrational levels. The Caltrans vibration damage threshold for historic and some old buildings is 0.5 in/sec ppv for transient sources and 0.25 in/sec ppv for continuous or frequent intermittent sources. For older residential structures the vibration limit is 0.5 in/sec ppv for transient sources and 0.30 in/sec ppv for continuous or frequent intermittent sources. The acceptable vibration limits for new residential structures are 1 in/sec ppv for transient sources and 0.5 in/sec ppv for continuous or frequent intermittent sources (Caltrans, 2013). The level at which vibration becomes strongly perceptible to humans is 0.1 in/sec ppv for steady state vibrations. Continuous vibrations from traffic become readily perceptible at 0.08 in/sec ppv and begins to annoy at 0.1 in/sec ppv. Transient vibration becomes distinctly perceptible to humans at 0.24 in/sec ppv (Caltrans, 2013).

4.13.4 Previous CEQA Reviews

1981 EIR

Noise impacts of the initial mining operation at the site (excavation, crushing, stockpiling, and hauling of materials as well as the operation of asphalt concrete batch plant) were analyzed in the 1981 EIR. The EIR determined that although mitigation measures will be applied to reduce noise levels within the project area and must be within OSHA regulations for the protection of employees, noise, and emission sources not previously existent will be present if operations are commenced. This impact is listed under significant environmental effects which cannot be avoided in the EIR. Noise generated by the many moving components of crushers and hot plants when in operation cannot exceed 90 dB (decibel) level at the property lines in accordance with Federal Regulations. The following mitigation measures were contained in the 1981 EIR to address noise from the plant:

“General plant noise can be further reduced through application of various corrective measures. Keeping components in good repair and property adjustment, application of noise absorption materials, enclosure of known sources with noise barrier covers, use of exhaust mufflers, vibration isolation mounts, and proper lubrication are among many possible methods of reducing noise within the plants.”

1997 EIR

Noise impacts of the addition of a ready-mix concrete plant to the site, increase in height of the exposed quarry face, increase in harvest volume, and expansion of the season of operation were evaluated in the 1997 EIR. The 1997 EIR determined that increased noise related to site operations in the immediate vicinity were less than significant. The 1997 EIR also determined noise from truck traffic was less than significant. Although noise impacts were determined to be less than significant, the following mitigation measure for noise was included in the 1997EIR:

“At the operator’s expense, project noise levels next to equipment and at property lines adjacent to residentially zoned parcels shall be monitored at the request of the lead agency by a qualified acoustical analyst with reports to the Community Development Department to ensure that County and federal noise standards are not exceeded. If noise standards are exceeded, the applicant shall take corrective action under the direction of the Lassen County community Development Department.”

2019 EIR

Noise impacts of the currently permitted operation were evaluated in the 2019 EIR. Noise impacts from material facility extended hours of operations and material haul trucks exceeding standards established in the *Lassen County General Plan* were determined to be significant. Noise increases in ambient noise levels along material haul routes were determined to be significant. The following mitigation measures for noise were included in the 2019 EIR.

1. *The operator shall restrict the start-up of onsite generator operations to between the hours of 7:00 a.m. to 10:00 p.m.*
2. *Shield the asphalt plant generator noise levels by either placing the generator behind a berm or barrier, and orient the generator opening to the north. The berm or barrier shall extend to a height even with the top of the generator.*
3. *No use of “jake” brakes leaving the Project site.*
4. *“Reduce speed” signs will be posted by the operator for trucks on the access road and Ward Lake Road and “no use of jake break” signs will be posted by the operator on the access road and at the Center Road (A2) and Ward Lake Road intersection.*
5. *Maintain traffic noise below 65 dB Ldn by reducing truck traffic during 24-hour operations to 550 one-way truck trips (275 arriving and 275 departing). The Lassen County General Plan requires discretionary approval to allow for noise levels between 60 dB Ldn and 70 dB Ldn, and as such a condition of approval to implement this measure should be added.*

Noise impacts related to facility extended hours of operations and material haul trucks exceeding Lassen County noise standards were determined to be less than significant with mitigation measures implemented. The 2019 project was found to result in traffic noise increases along the material haul routes which will result in a significant increase in noise levels in the project vicinity above those existing without the project. The Planning Commission found these impacts to noise after implementation of the above mitigation measures to be significant and unavoidable. Cumulative impacts related to noise after implementation of the above mitigation measure were also found to be significant and unavoidable.

4.13.5 Thresholds of Significance

In accordance with CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the project. The following significance thresholds related to *Noise* have been derived from Appendix G of the CEQA Guidelines:

- *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. Specifically, exterior noise levels exceeding 60 dBA Ldn, or the performance standards contained in Table 4-25.*
- *Result in the generation of excessive groundborne vibration or groundborne noise levels. Specifically, a threshold of 0.1 in/sec p.m. is considered a safe criterion that would protect against architectural or structural damage and human annoyance.*
- *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, where the project would expose people residing or working in the project area to excessive noise levels.*

4.13.6 Impact Analysis

The proposed Project does not include a change in existing operating hours of the quarry or operating conditions contained within the current use permit for the quarry. The proposed Project will not result in a change of equipment in the plant area of the site or an increase in maximum traffic noise levels. The proposed Project will result in an increase in the annual use of the primary crusher of approximately 33 percent and an increased use of the majority of off-road equipment (approximately 50 percent) throughout the year. This will not result in a change in average hourly or maximum noise levels generated by the existing quarry. The potential for Project operations to result in noise impacts is expected to be due to operation of mining equipment, blasting, and use of a portable crusher in the 78.6-acre expansion area of the Project site.

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

Areas of No Project Impact

As required by CEQA Guidelines §15082, the County issued a Notice of Preparation (NOP) on April 28, 2021 that summarized the proposed Project, stated its intention to prepare an EIR, and requested comments regarding the scope and content of the EIR from responsible and trustee agencies. In the course of the County's initial evaluation, certain impacts of the proposed Project were found to not to be significant because of the inability of a project of this scope to create such

impacts or the absence of project characteristics producing effects of this type. The effects determined not to be significant are not required to be included in primary analysis sections of the DSEIR. As such, the following impacts either are not applicable to the proposed Project or are not reasonably foreseeable and are not addressed further within this section:

- *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, where the project would expose people residing or working in the project area to excessive noise levels.*

The nearest airport is the Susanville Airport which is approximately 8.2 miles to the southwest. The Project is not located within the vicinity of a private airstrip or an airport land use plan, or within two miles of a public airport or public use airport. No impacts would occur in this regard.

Project Impacts

Impact 4.13-1: Result in substantial temporary or permanent increase in ambient noise levels in excess of standards established in the Lassen County General Plan.

Plant Operations

The proposed quarry expansion does not include changes to hourly or maximum plant operational noise levels analyzed in the 2019 EIR. Noise measurements of plant operations at the quarry were conducted on Thursday May 3rd through Friday May 4th, 2018 and included in the *Hat Creek Materials Facility Expansion Environmental Noise Analysis* (refer to Appendix H). Noise measurements were conducted when the plant was operating during daytime and nighttime hours. Crushing operations at the quarry result in noise levels equal to or less than 45 dB L50 at the residential receptor closest to the project site. Start-up operations produce the loudest noise levels, and once operations occur, they were generally in the mid 30 dBA L50 range. The measured 24-hour Ldn (day/night average sound level) at the location representing the nearest residence to plant operations was 55.6 dB.

Pursuant to operating conditions contained in the use permit for the quarry, start-up operations do not occur during the nighttime hours of 10:00 p.m. to 7:00 a.m. The proposed Project does not include changes to the existing operating hours of the quarry or existing operating conditions contained in the use permit for the quarry. The proposed Project will not result in additional equipment in the plant area of the Project site or locate plant equipment closer to sensitive receptors. The proposed Project will include an annual increase in the use of the primary crusher (approximately 33 percent) and an increase in the annual hours of off-road equipment use (increase of 50 percent for the majority of off-road equipment). This will not result in a change to maximum or hourly average noise levels generated at the plant site.

To produce additional volume of materials, equipment will be operated additional days/hours each year (within current operating hours and pursuant to existing operating conditions). Operation of the crusher and off-road equipment for additional hours each day could result in a higher average noise levels over a 24-hour period. However, noise levels from increased equipment use would not exceed 55.6 dB Ldn at the nearest residential receptor (the noise level measured during worst-case 24-hour operating conditions that included crushing operations during daytime and nighttime hours).

In addition, some of the plant equipment at the Project site has been switched to electric power instead of using a generator, reducing noise levels from plant operations. One of the two generators used to power crushing operations was removed in January 2022, further reducing noise levels generated by the plant. Plant operation noise levels of the proposed Project will not exceed standards established in the *Lassen County General Plan*. Impacts are less than significant in this regard.

Expansion Area

Noise will be generated in the expansion area by excavation and hauling of materials. Noise will be similar to that generated by extraction activities occurring within the current mining area of the operation. Equipment will include articulated dump trucks and loaders and dozers. A portable crusher will also be operated in the expansion area and limited blasting will occur. The expansion area is located north of the currently permitted mining area and further from residences in the Project vicinity than the current mining boundary. The closest residence is located more than $\frac{3}{4}$ mile from the expansion area (4,500 feet). Rock will be removed beginning at the south end of the expansion area near the current operation and expand northward as mining progresses.

Activities producing the highest noise levels in the expansion area will include crushing and blasting. Blasting produces a maximum noise level of 94 dB at a distance of 50 feet (FHWA, 2006). Using the reference noise level for blasting of 94 dB at a distance of 50 feet and the standard noise attenuation rate of 6 dB per doubling of distance, at a distance of 4,500 feet (closest residence) blasting in the expansion area will result in a maximum noise level of 55 dB, which is below the Lassen County daytime maximum noise level standard of 70 dB. Blasting in the expansion area will occur intermittently (3 to 7 times per year) and will not exceed the L50, L25, L8 or L1.5 daytime noise standards for Lassen County at the nearest residence. The Project does not include revisions to the current operating conditions of the quarry. Blasting will not occur at night during 24 hour operations. The operator will continue to comply with Condition of Approval #3 of the Use Permit Amendment No. 2018-003 that requires that no grading, blasting, or excavating shall be allowed onsite between the hours of 6:00 p.m. and 7:00 a.m. year-round.

In an effort to reduce the movement of material from the expansion area, a portable crusher may be moved into the flat area on the western side of the proposed expansion area. Extensive data collected at portable aggregate crushing/screening operations at northern and central California aggregate facilities indicates that the typical noise generation of such facilities is approximately 80 dB Leq and 85 dB Lmax at a reference distance of 100 feet from the operating plant equipment (BAC, 2021). Assuming an attenuation rate of 7.5 dB per doubling of distance (due to soft-site absorptive ground surface, topography, and stockpiles between the expansion area and the closest residences), noise levels from the portable crusher are estimated to be 39 dB Leq/44 dB Lmax at a distance of 4,500 feet. Noise generated by activities within the expansion area will not exceed Lassen County noise standards at nearby receptors and will result in a less than significant impact.

Materials Haul Truck Operations

Existing traffic noise levels during peak operational periods of up to 550 truck haul trips per day currently exceed the 60 dB Ldn Lassen County traffic noise level standard along Ward Lake Road and Center Road west of Ward Lake Road. The worst-case traffic noise levels generated by the current operation are up to 65 dB along area roadways as shown in Table 4-24.

Noise levels up to 65 dB are conditionally acceptable and allowed by Use Permit Amendment No. 2018-003. The proposed Project will not result in a significant increase in average or maximum traffic volumes generated by the current operation. Increased production of the Project will be met by maintaining larger truck loads (i.e., greater than 24 tons), not by increasing truck volumes. The project does not include revisions to existing operating conditions of the quarry. Since the Project does not require an increase in traffic volumes, it will not result in an increase in traffic noise levels along area roadways compared to existing baseline conditions.

Mitigation Measure 4.13-1 provides that the proposed expansion will continue to comply with Condition of Approval #8 of Use Permit Amendment No. 2018-003 which limits truck trips to an average of 26 round trips (26 arriving and 26 departing) throughout the calendar year and a daily maximum of 275 round trips (275 arriving and 275 departing). Mitigation Measure 4.13-2 requires the mine operator to install pneumatic road tubes or other similar methods to ensure that annual truck counts do not exceed limitations imposed by Condition of Approval #8 of Use Permit Amendment No. 2018-003. With the incorporation of Mitigation Measure 4.13-1 and Mitigation Measure 4.13-2, the proposed quarry expansion will result in a less than significant impact related to traffic noise level increases.

Impact 4.13-2: Result in the generation of excessive groundborne vibration or groundborne noise levels.

The proposed quarry expansion will not introduce any new equipment or processes to the Project site that will increase the levels of vibration or ground born noise levels generated by current operations. Existing equipment used for material extraction at the current operation will be used in the expansion area. Equipment operated in the expansion area will be operated further from residences than equipment operated in the current mining area and will not result in increased levels of vibration at the closest residence or structure compared to existing operations.

The activity at the quarry that produces the highest level of vibration is blasting. Blasting currently occurs 3 to 7 times per year and occurs during the middle of the day. The Project will not increase blasting frequency or conditions on blasting contained in the current use permit for the quarry. Vibration levels generated by blasting depend on many factors including blast design and site-specific geology. Blast vibration can be predicted using square-root scaled distance that divides the distance from the point of interest to the blast by the square root of the largest charge weight detonated on one delay period. Based upon vibration data collected at a various northern California hard rock quarries, the highest Peak Particle Velocity (PPV) of a hard rock quarry blasting event can be up to 0.11 inches per second measured 1,400 feet from the blast (BAC, 2012).

Blasting at the Project site currently occurs more than 2,500 feet from the closest residence and blasting within the proposed expansion area will occur greater than 4,500 feet from the closest residence. Vibration levels will decrease with distance from the source and are not anticipated to exceed 0.1 in/sec PPV at the closest residence. Levels of vibration of equipment operated within the expansion area will be much lower than vibration occurring during blasting events. For reference, a large bulldozer generates 0.089 PPV (inches/second) at a distance of 25 feet and loaded trucks result in 0.076 PPV at a distance of 25 feet. Vibration levels attenuate with distance from the source and would not be perceptible at the nearest residence located 4,500 feet from the proposed expansion area. Mitigation Measure 4.13-3 provides that no grading, blasting, or excavating will be allowed between the hours of 6:00 p.m. and 7:00 a.m. year-round. With implementation of

Mitigation Measure 4.13-3, impacts related to groundborne vibration and ground born noise levels will be less than significant.

4.13.7 Mitigation Measures

The following mitigation measures would reduce impacts to less than significant levels:

MM 4.13-1: *Materials Haul Truck Operations*. To maintain traffic noise below 65 dB Ldn, the operator shall continue to comply with Condition of Approval #8 of Use Permit Amendment No. 2018-003 (Resolution No. 19-024) which limits truck trips to an average of 26 round trips (26 arriving and 26 departing) throughout the calendar year and a daily maximum of 275 round trips (275 arriving and 275 departing).

MM 4.13-2: *Material Haul Truck Counts*. Prior to commencement of mining activities within the quarry expansion area, the mine operator shall install pneumatic road tubes or other similar methods to quantify daily truck trips in an effort to ensure that annual truck counts do not exceed limitations imposed by Condition of Approval #8 of Use Permit Amendment No. 2018-003. Results of the counts shall be provided to the County on an annual basis (January 1st of each year) throughout the duration of mining activities.

MM 4.13-3: *Plant and Expansion Area Operations*. The following measures shall be implemented:

- Restrict crushing operations to the daytime hours of 7:00 a.m. to 10:00 p.m.
- The operator shall continue to limit winter operation (no grading, excavating, or blasting per Resolution No. 97-067, Condition #21).
- The operator shall limit 24-hour operations to April 1st to December 31st annually.
- The operator shall not grade or excavate between 7:00 p.m. and 7:00 a.m. or blast between 6:00 p.m. and 7:00 a.m.

4.13.8 Level of Significance after Mitigation

Impacts would be less than significant with mitigation incorporated.

4.14 Transportation

Transportation impacts of the current mining operation were analyzed in the 2019 EIR prepared for the current mining activities at the Project site. The proposed Project does not include an increase in average or maximum traffic numbers allowed by the current use permit (Use Permit Amendment No. 2018-003) or change in traffic distribution. The additional proposed production will be met by optimizing truck loads instead of increasing truck trips. The traffic study prepared for the 2019 EIR (Solaegui Engineers, 2018) is included as Appendix I, *Traffic Study*.

Traffic volumes generated by the proposed quarry expansion will not exceed traffic volumes analyzed in the 2019 SEIR. The previous SEIR focused on impacts to Level of Service (LOS) and need for turn lanes and did not include a discussion of traffic impacts related to vehicle miles traveled. CEQA Guidelines §15064.3 establishes vehicle miles traveled (VMT) as the most appropriate measure of transportation impacts, shifting away from the LOS analysis that evaluated a project's impacts on traffic conditions on nearby roadways and intersections. Lead agencies were required to comply with the Guideline regarding VMT starting July 1, 2020.

This section provides a description of roadways in the Project area, existing VMT on Project-area roadways and summarizes the previous CEQA analyses of traffic impacts in the Project area for the currently permitted operation. This section contains an analysis of Project-related transportation and traffic impacts related to VMT that was not discussed in the previous EIR.

4.14.1 Environmental Setting

Area Roadways

The Project site is located east of Ward Lake Road, north of Center Road (A27). The Project site is accessed by Ward Lake Road. Descriptions of roadways and intersections in the Project vicinity are included below.

- Center Road (A27) is a rural, two-lane roadway with one through lane in each direction in the vicinity of the site. The speed limit is posted for 35 miles per hour generally east of Ward Lake Road, 45 miles per hour west of Ward Lake Road, and 55 miles per hour farther west. Roadway improvements generally include paved shoulders with solid white edge lines and a striped centerline.
- Ward Lake Road (A27) is a rural, two-lane roadway with one through lane in each direction north of Center Road (A27). The speed limit is not posted. Roadway improvements generally include paved travel lanes with a striped centerline.
- Cutoff Road is a rural, two-lane roadway with one through lane in each direction from US-395 to north of Center Road (A27). The speed limit is not posted except for a 25 mile per hour zone on a curve. Roadway improvements generally include paved travel lanes with a striped centerline.
- Center Road (A27)/Ward Lake Road intersection is an unsignalized three-leg intersection with stop control at the north approach. The north approach contains one shared left-right turn lane. The west approach contains one shared left turn-through lane. The east approach contains one shared right turn-through lane.

- Center Road (A27)/Cutoff Road intersection is an unsignalized four-leg intersection with stop control at the north and south approaches. All approaches contain a shared left turn-through/right-turn lane.

Peak traffic hours identified by Lassen County Department of Public Works on the Project area roadway network occur from 7:00 a.m. to 8:00 a.m., 4:00p.m. to 5:00 p.m., and 9:00 a.m. to 10:00 p.m.

Vehicles miles traveled for 2017 and future predictions for VMT contained in the Lassen County Regional Transportation Plan are included in Table 4-27. Miles traveled are expected to increase the most on the State Highway System (Green Dot, 2018).

<p>Table 4-27 LASSEN COUNTY FUTURE DAILY VEHICLE MILES TRAVELED</p>					
Jurisdiction	2017 VMT	2027 VMT	2037 VMT	Total Change (%)	Average Change (%)
Susanville City	87.47	95.34	103.21	-	-
Lassen County	554.26	604.15	654.03	-	-
State Highway System	718.40	783.06	847.71	-	-
State/Federal/Indian	28.14	30.67	33.21	-	-
Total	1,332.30	1452.21	1572.12	18.0%	0.9%
Source: 2017 Lassen Regional Transportation Plan, adopted February 9, 2018.					

Existing Traffic

The Project site is accessed off of Ward Lake Road. Trip distribution for haul trucks of the mining operation is approximately 60 percent on Center Road west of Ward Lake Road and 40 percent on Center Road east of Ward Lake Road during normal operations. The following conditions of approval for Use Permit Amendment No. 2018-003 are required for traffic generated by the existing operation:

- Haul trucks associated with the mining operation shall not use Center Road (A-27) east of Ward Lake Road between the hours of 10:00 p.m. and 7:00 a.m.; during these hours all trucks must turn west onto Center Road from Ward Lake Road to avoid the community of Litchfield.*
- Haul trucks (loaded or empty) associated with the mining operation shall not exceed a daily average of 26 round trips (26 arriving and 26 departing) throughout the calendar year and shall not exceed a daily maximum of 275 round trips (275 arriving and 275 departing) with a maximum of 173 total trips occurring between the hours of 10:00 p.m. and 7:00 a.m., excluding personal employee vehicles and light-duty trucks assigned to employees.*
- Within 60 days of issuance of authorization to operate, the mine operator shall post advisory "Reduced Speed to 25 MPH" signs on the access road and Ward Lake Road (one northbound and one southbound, at minimum), in coordination with the Lassen County Department of Public Works.*
- The operator shall assist Lassen County Road Department with the installation of an eastbound left-hand turn lane on Center Road onto Ward Lake Road, within 30 months of approval (timeline as established by the Director of Public Works), by providing necessary asphalt materials.*

16. *The operator shall assist the Lassen County Road Department with the repair of and/or asphalt concrete overlay of the Lassen County maintained portion of Ward Lake Road, within 30 months of project approval (timeline as established by the Director of Public Works), by providing the necessary asphalt materials.*
17. *Within 60 days of project approval, the operator shall submit a \$200,000 surety bond, payable to Lassen County, as financial assurance for the completion of the above road maintenance assistance. Upon completion of all required assistance, the surety bond shall be released back to the operator. If the above maintenance is to be completed in phases, the Director of Public Works may authorize incremental release of said bond as phased work is completed.*

Traffic generated by the existing facility includes employee trips and material hauling truck trips. The majority of traffic includes haul truck trips transporting materials to construction sites. The number of truck trips generated by the facility depends on the number and size of the construction projects supplied by the operation. During peak periods, as many as 275 round trip haul truck trips occur. The facility is not operational on Sundays and no truck trips occur. Condition of Approval #8 limits the number of haul trucks associated with the mining operation to a daily average of 26 round trips (26 arriving and 26 departing) throughout the calendar year with a daily maximum of 275 round trips (275 arriving and 275 departing).

An estimate of the average daily VMT generated by the existing operation is included in Table 4-28. The daily VMT is estimated based on a daily average of 26 round trips (26 arriving and 26 departing) throughout the calendar year allowed by Use Permit No. 2018-003, and a round-trip length of 60 miles (30 miles each way) for haul trucks. The employee and supplier truck trip numbers were obtained from the 2018 traffic study prepared for the existing operation. Average daily VMT that could be generated by the existing operation is 2,630.

Table 4-28 EXISTING ESTIMATED VEHICLE MILES TRAVELED			
Description	Number of Trips Per Day	Average Trip Length (miles)	VMT (Annual Daily Average)
Haul Truck	26 arriving, 26 departing	60 miles (30 miles each way)	1,560
Supplier Trucks	5 arriving, 5 departing	102 miles ¹ (51 miles each way)	510
Employees	20 arriving, 20 departing	28 miles ² (14 miles each way)	560
Total			2,630
Notes:			
¹ Trip length for supplier trucks was determined by assuming half the supplier trucks would be coming from Susanville and half would be coming from Reno.			
² Trip length for employees is the distance of the operation to Susanville.			

4.14.2 Regulatory Setting

Traffic analysis in the State of California is guided by policies and standards set at the State level by Caltrans and at the local level by local jurisdictions. The *Lassen County General Plan* and *Standish-Litchfield Area Plan* provide the necessary framework to guide the growth and development of the County's transportation-related infrastructure.

State

California Department of Transportation

Caltrans policies are summarized in the *Guide for the Preparation of Traffic Impact Studies* (December 2002). These guidelines identify when a traffic impact study is required, what should be included in the study, analysis scenarios, and guidance on acceptable analysis methodologies. Caltrans endeavors to maintain a target service level of between LOS C and LOS D on State highway facilities; however, this may not always be feasible, and a lower service level may be acceptable.

CEQA Guidelines §15064.3

CEQA Guidelines §15064.3 describes considerations for evaluation a project's transportation impacts. Generally, vehicle miles traveled is the most appropriate measure of transportation impacts. "vehicle miles traveled" refers to the amount and distance automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in subdivision (b)(2) regarding roadway capacity, a project's effect on automobile delay shall not constitute a significant environmental impact. Section (b) describes criteria for analyzing transportation impacts.

Local

Lassen County General Plan

The Circulation Element of the *Lassen County General Plan* contains the following policies related to circulation that are applicable to the proposed Project:

- Policy CE-6: The County shall review and, when warranted, formulate improved standards for the necessary improvement and maintenance of roads serving new development, including standards for the incremental improvement or development of public roads.
- Policy CE-10: In consideration of proposed projects which would generate a substantial number of large trucks carrying heavy loads, the County shall require special mitigation measures to ensure that those projects do not cause, or will adequately mitigate, significant deterioration of County roads.

Standish-Litchfield Area Plan

The *Standish-Litchfield Area Plan* states the following policy and implementation items related to circulation that are applicable to the Project:

- Policy 17-A: It shall be a policy of Lassen County to provide a transportation system that provides safe and efficient service for the travel needs of all citizens, the movement of goods and as a means to implement the goals and objectives of this plan.

4.14.3 Previous CEQA Reviews

1981 EIR

The 1981 *Environmental Impact Report for Operation of Aggregate Materials Source Operation of Rock Crushing Plant Operation of Asphalt Concrete Batch Plant (SCH No. 80062304)* prepared for the original operation at the site analyzed traffic impacts of the initial mining operation. The 1981 EIR stated

that it was impossible to accurately predict the amount of aggregates or asphaltic concrete which would be produced and hauled during an anticipated working season. The EIR described paving projects that could generate an estimated 105 truck trips per day. Traffic impacts were determined to be significant and unavoidable in the 1981 EIR.

The 1981 EIR determined that volumes on a previously “little-used” road and noise created by same cannot be eliminated or effectively reduced if the project was approved. Exposure to the increased traffic would require new awareness on the part of the occasional users of County Road 308 (Ward Lake Road); and, safety measures, including speed limitations, established to minimize the adverse effects of heavier usage.

The 1981 EIR included the following mitigation measures related to traffic:

- *Pave the access and haul roads as well as the plant site as soon as feasible to eliminate the primary complaint of dust which results when equipment and trucks operate on unpaved areas. Actual timing of paving these areas would be governed by the volume of production and hauling warranting this improvement and subject to review and recommendations of the Planning Commission.*
- *Use of water trucks on any unpaved portions of the area is anticipated; and vehicle speed within the site controlled at 10 mph to avoid creation of unnecessary dust.*
- *Water or dust oils would be applied to County Road 308 (Ward Lake Road) by the applicant as required to alleviate dust from truck traffic and would continue until such time as paving is required.*
- *“Stop” sign would be installed at the junction of the access road with County Road 308 by the applicant and if warranted “Truck Crossing” warning signs placed along the County Road.*
- *Speed on County Road 308 from the plant access point to A-27 (Center Road) would necessarily be limited to approximately 25 MPH due to the road conditions and the short length (approximately one mile) encompassed.*
- *Trucks hauling materials would not exceed the legal load limit allowed of 80,000 lbs. gross weight.*

1997 EIR

The 1997 Ward Lake Expansion EIR prepared for the expansion of mine boundaries and allowing year-round operations with limited winter activity, determined that traffic impacts of the expansion were less than significant. The 1997 EIR analyzed the traffic impacts of approximately 20 aggregate haul per day and determined that truck volumes would have a less than significant traffic impact. Although the 1997 EIR found traffic impacts to be less than significant, the EIR included the following mitigation measures:

- a. *Safety Measures. No measures were recommended in the 1996 Initial Environmental Study for this less than significant impact. However, the 1981 EIR recommended the use of a number of measures if they become warranted as the project progresses. The County should continue to monitor the project traffic flow for safety concerns and institute any of the following or other appropriate measures if it becomes necessary:*

- *Installation of a “Stop” sign at the junction of the access road with County Road 308 by the applicant if warranted, “Truck Crossing” warning signs along County Road 308.*
 - *Decrease speed limits on Ward Lake Road to 25 mph due to the road conditions and the short length encompassed (approximately one mile).*
- b. *Load limits. Trucks hauling materials should not exceed the legal allowable load limit of 80,000 lbs. (40 tons) gross weight.*

2019 EIR

The 2019 EIR prepared for the existing operation determined traffic impacts of the expansion to 24-hour operations and increase in the volume of haul trucks during peak operations were less than significant. It was determined there would be no impact related to a substantial increase in traffic in relation to the existing traffic load and capacity of the street system or need for additional turn lanes. It was also determined the project would not exceed a level of service standard established by the County, conflict with local circulation policies, or cause cumulative impacts to traffic load and capacity or need for additional turn lanes. Mitigation measures were not required.

4.14.4 Thresholds of Significance

In accordance with CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the project. The following significance thresholds related to *Transportation* have been derived from Appendix G of the CEQA Guidelines:

- *Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.*
- *Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).*
- *Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).*
- *Result in inadequate emergency access.*

4.14.5 Impact Analysis

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

Areas of No Project Impact

As required by CEQA Guidelines §15082, the County issued a Notice of Preparation (NOP) on April 28, 2021 that summarized the proposed Project, stated its intention to prepare an EIR, and requested comments regarding the scope and content of the EIR from responsible and trustee agencies. In the course of the County's initial evaluation, certain impacts of the proposed Project were found to not be significant because of the inability of a project of this scope to create such impacts or the absence of project characteristics producing effects of this type. The effects determined not to be significant are not required to be included in primary analysis sections of the DSEIR. As such, the following impacts either are not applicable to the proposed Project or are not reasonably foreseeable and are not addressed further within this section:

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

The 2019 EIR determined the existing operation would not result in changes or impacts to air traffic patterns, no changes or impacts in design features, no changes in policies, plans, or programs regarding public transit, bicycle or pedestrian features, no changes or impacts to parking facilities, and no changes or impacts to rail, water, or air traffic. The proposed quarry expansion will not increase or change the distribution of current traffic generated by the existing operation. The proposed Project will continue to comply with Condition of Approval #8 for Use Permit Amendment No. 2018-003 and will not exceed a daily average of 26 haul truck round trips throughout the calendar year or the daily maximum of 275 haul truck round trips. No new impacts would occur in this regard.

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

Impacts of traffic from the current operation related to emergency access, existing traffic load and capacity, level of service standards established by the County, need for additional turn lanes, and consistency with local circulation policies were determined to be less than significant. Implementation of the proposed quarry expansion will not result in a change or increase the severity of these impacts. The proposed Project will continue to comply with the additional Conditions of Approval related to traffic for Use Permit No. 2018-003 for truck traffic distribution on area roadways and requiring assistance with roadway improvements. Traffic volumes generated by the proposed quarry expansion will not exceed the peak hour traffic numbers analyzed in the 2019 EIR. No new impacts would occur in this regard.

Project Impacts

Impact 4.14-1: Conflict with or be inconsistent with CEQA Guidelines §15064.3, subdivision (b).

Lassen County does not have a threshold of significance related to VMT. The California Governor's Office of Planning and Research *Technical Advisory on Evaluating Transportation Impacts in CEQA* contains recommendations regarding significance thresholds for VMT for different project types and land uses. The OPR Guidance does not include thresholds specific to mining or industrial projects. For land use projects, vehicle miles traveled exceeding an applicable threshold

of significance may indicate a significant impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.

Implementation of the proposed quarry expansion will not result in an increase in VMT compared to existing permitted operations. Proposed additional production will be achieved by maximizing truck loads, not increasing truck trips. The estimated VMT of existing operations is included in Table 4-28. The VMT are created by construction projects requiring materials and would occur with or without the Project. The facility tends to shorten trips and reduce VMT by providing a construction material source in the region serving local projects. Other sources of aggregate and asphalt large enough to serve the construction projects generally served by the proposed Project are located near Lake Almanor or north of Reno in Nevada. Therefore, the proposed Project results in an overall decrease in VMT for construction projects within Lassen County.

The proposed quarry expansion will not result in an increase in VMT and will not conflict with or be inconsistent with CEQA Guidelines §15064.3. Impacts are considered less than significant in this regard.

4.14.6 Mitigation Measures

No mitigation measures are required.

4.14.7 Level of Significance after Mitigation

No mitigation measures are required. Impacts would be less than significant.

4.15 Wildfire

The CEQA Guidelines were amended in 2019 to include the addition of a Wildfire section to the Appendix G Checklist. The 2019 EIR did not contain separate analysis of the current operation for wildfire impacts as this resource was not required at the time the previous EIR was prepared. This section provides a brief summary of the wildfire setting of the Project site, wildfire regulations, and discussion of the potential wildfire impacts related to the proposed quarry expansion.

4.15.1 Environmental Setting

The California Department of Forestry and Fire Protection (CAL FIRE) is required by law to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones (FHSZ), influence how people construct buildings and protect property to reduce risk associated with wildland fires (CAL FIRE, 2007).

A Fire Hazard Severity Zone (FHSZ) is a mapped area that designates zones (based on factors such as fuel, slope, and fire weather) with varying degrees of fire hazard (i.e., moderate, high, and very high). FHSZ maps evaluate wildfire hazards, which are physical conditions that create a likelihood that an area will burn over a 30-to 50-year period. They do not take into account modifications such as fuel reduction efforts.

While FHSZs do not predict when or where a wildfire will occur, they do identify areas where wildfire hazards could be more severe and therefore are of greater concern. FHSZs are meant to help limit wildfire damage to structures through planning, prevention, and mitigation activities/requirements that reduce risk. The FHSZs serve several purposes: they are used to designate areas where California's wildland urban interface building codes apply to new buildings; they can be a factor in real estate disclosure; and local governments consider fire hazard severity in the safety elements of their general plans (California State Geoportal, 2020).

The existing quarry and proposed expansion area are located within a State Responsibility Area (SRA), an area where the state has financial responsibility for wild land fire protection. Based on the map of *Fire Hazard Severity Zones in the State Responsibility Area in Lassen County* adopted by CAL FIRE on November 7, 2007, the Project site is located in a Moderate Fire Hazard Severity Zone.

According to the *Lassen County General Plan* Safety Element, the entire county is prone to fire, either man-made or natural. Location, accessibility, local climatic conditions, topography, and vegetation type are among the factors associated with the intensity of a fire. Among the factors which can induce fire hazard potential to human safety and the environment is the degree to which fire hazard reduction measures are practiced in an area and, should a fire occur, the response time and effectiveness of the fire suppression activities. All of the populated areas of Lassen County are in high fire hazard areas of either/or timber, brush, and/or grasslands, and all of these areas are especially vulnerable during peak dry seasons (Lassen, 2020).

Topography in the vicinity of the expansion area slopes from east to west with gentle to moderate slopes. Elevations within the proposed quarry expansion area range from about 4,200 feet above mean sea level (msl) to 4,540 feet above msl. Prior to mining activities, the currently operating site was characterized by a small knob rising approximately 200 feet from the current base of

operations. The pit floor in the currently operating mine site is now flat with a less than 4 percent slope.

Areas disturbed by previous mining and processing are considered barren. The remaining areas surrounding the existing quarry consist mainly of shrub steppe communities with interspersed areas of annual grassland.

4.15.2 Regulatory Setting

The following is a description of State and local environmental laws and policies that are relevant to the CEQA review process for the proposed expansion area.

State

California Department of Forestry and Fire Protection

CAL FIRE protects the people of California from fires, responds to emergencies, and protects and enhances forest, range, and watershed values providing social, economic, and environmental benefits to rural and urban citizens. The Office of the State Fire Marshal supports CAL FIRE's mission by focusing on fire prevention. It provides support through a wide variety of fire safety responsibilities including by regulating buildings in which people live, congregate, or are confined; by controlling substances and products which may, in and of themselves, or by their misuse, cause injuries, death, and destruction by fire; by providing statewide direction for fire prevention in wildland areas; by regulating hazardous liquid pipelines; by reviewing regulations and building standards; and by providing training and education in fire protection methods and responsibilities.

California Fire Code

The California Fire Code (CFC) is contained within Title 24, Chapter 9 of the California Code of Regulations. Based on the International Fire Code, the CFC is created by the California Buildings Standards Commission and regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. Similar to the International Fire Code, the CFC and CBC use a hazards classification system to determine the appropriate measures to incorporate to protect life and property.

California Public Resources Code

California Public Resources Code Sections 4290 and 4291 are discussed in further detail as follows:

- *Public Resources Code Section 4290.* Requires minimum fire safety standards related to defensible space that are applicable to SRA lands and lands classified and designated as VHFHSZs.
- *Public Resources Code Section 4291.* Requires a reduction of fire hazards around buildings, which requires 100 feet of vegetation management around all buildings and is the primary mechanism for conducting fire prevention activities on private property within Cal Fire jurisdiction.

Fire Hazard Severity Zoning

CAL FIRE mapped Fire Hazard Severity Zones (FHSZ) in Lassen County based on fuel loading, slope, fire weather, and other relevant factors as directed by California Public Resources Code

Sections 4201–4204 and Government Code Sections 51175–51189. FHSZs are ranked from moderate to very high and are categorized for fire protection within a Federal Responsibility Area (FRA), State Responsibility Area (SRA), or Local Responsibility Area (LRA) under the jurisdiction of a federal agency, CAL FIRE, or local agency, respectively. As noted above the Project site is located within a Moderate FHSZ.

California Strategic Fire Plan

The *California Strategic Fire Plan* (2018) reflects the State’s focus on (1) fire prevention and suppression activities to protect lives, property, and ecosystem services, and (2) natural resource management to maintain the state’s forests as a resilient carbon sink to meet California’s climate change goals and to serve as important habitat for adaptation and mitigation. The *California Strategic Fire Plan* provides a vision for a natural environment that is more fire resilient; buildings and infrastructure that are more fire resistant; and a society that is more aware of and responsive to the benefits and threats of wildland fire; all achieved through local, State, federal, tribal, and private partnerships. Plan goals include the following:

- Identify and evaluate wildland fire hazards and recognize life, property, and natural resource assets at risk, including watershed, habitat, social and other values of functioning ecosystems. Facilitate the collaborative development and sharing of all analyses and data collection across all ownerships for consistency in type and kind.
- Promote and support local land use planning processes as they relate to: (a) protection of life, property, and natural resources from risks associated with wildland fire, and (b) individual landowner objectives and responsibilities.
- Support and participate in the collaborative development and implementation of local, county, and regional plans that address fire protection and landowner objectives.
- Increase fire prevention awareness, knowledge and actions implemented by individuals and communities to reduce human loss, property damage and impacts to natural resources from wildland fires.
- Integrate fire and fuels management practices with landowner/land manager priorities across jurisdictions.
- Determine the level of resources necessary to effectively identify, plan and implement fire prevention using adaptive management strategies.
- Determine the level of fire suppression resources necessary to protect the values and assets at risk identified during planning processes.
- Implement post-fire assessments and programs for the protection of life, property, and natural resource recovery.

California Emergency Services Act

The California Emergency Services Act was adopted to establish the State’s roles and responsibilities during human caused or natural emergencies that result in conditions of disaster and/or extreme peril to life, property, or resources of the State. This act is intended to protect health and safety by preserving the lives and property of the people of the state.

California Natural Disaster Assistance Act

The California Natural Disaster Assistance Act provides financial aid to local agencies to assist in the permanent restoration of public real property, other than facilities used solely for recreational purposes, when such real property has been damaged or destroyed by a natural disaster. The

California Natural Disaster Assistance Act is activated after a local declaration of emergency and the California Emergency Management Agency gives concurrence with the local declaration, or after the governor issues a proclamation of a state emergency. Once the act is activated, the local government is eligible for certain types of assistance, depending on the specific declaration or proclamation issued.

California Building Code

Chapter 7A of the California Building Code (CBC) applies to building materials, systems and/or assemblies used in the exterior design and construction of new buildings located within a WUI Fire Area. The purpose of this chapter is to establish minimum standards for the protection of life and property by increasing the ability of a building located in any FHSZ within SRAs or any WUI Fire Area to resist the intrusion of flames or burning embers projected by a vegetation fire, and to contribute to a systematic reduction in conflagration losses. New buildings located in such areas shall comply with the ignition-resistant construction standards outlined in CBC Chapter 7A.

Senate Bill 1241

Senate Bill 1241 (Kehoe, 2012) required the Office of Planning and Research, the Natural Resources Agency, and CAL FIRE to develop “amendments to the initial study checklist of the [CEQA Guidelines] for the inclusion of questions related to fire hazard impacts for projects located on lands classified as state responsibility areas, as defined in section 4102, and on lands classified as very high fire hazard severity zones, as defined in subdivision (i) of section 51177 of the Government Code.” (Pub. Resources Code, §21083.01 (emphasis added).) The Agency added several questions addressing this issue. Notably, while SB 1241 required the questions to address specific locations, it did not necessarily limit the analysis to those locations, and so the Agency posed the questions for projects located within “or near” those zones. Lead agencies will be best placed to determine precisely where such analysis is needed outside of the specified zones. (California Natural Resources Agency, 2018).

Local

Lassen County General Plan

The Safety Element of the *Lassen County General Plan* Amended June 16, 2020, contains the following implementation measures pertaining to fire hazards.

- Implement a study to locate and identify areas of existing and potential fire, geologic, and health hazards.
- Require all structures and developments to strictly adhere to Public Resource Code 4291.
- Subdivision and minor land division ordinances should require that roads constructed be of sufficient width and that there would be multiple ingress and egress options for evacuation routes.
- Population centers should be encouraged to improve or install water systems with adequate storage capacities.
- Communities should be protected by fuel breaks together with fire suppression equipment backed up with an adequate water supply.
- For the purpose of faster response time of fire suppression equipment, all major and minor roads should have signs identifying their names.

Standish-Litchfield Area Plan

The *Standish-Litchfield Area Plan* contains the following implementation measures related to fire protection:

- The Building Department staff should work with the California Department of Forestry to establish and adopt specific fire safety standards for new construction.
- The latest fire hazard maps prepared by the California Department of Forestry should be kept on file by the Planning Department. The maps should be made available to the public upon request.
- The planning staff should incorporate fire hazard information and Fire Protection Master Plan policies in reports involving general plan amendments, zone changes, use permits and subdivisions.
- The County should encourage coordination and cooperation of all firefighting agencies in the Planning Area.
- If the Standish-Litchfield Fire Protection District finds it necessary to generate additional revenues for fire protection services in the Standish-Litchfield Fire Protection District, a funding mechanism for new development, through development fees, should be considered by the Fire Protection District Board of Directors and Lassen County Board of Supervisors and should be adopted by Lassen County.

4.15.3 Previous CEQA Reviews

The 2019 EIR did not contain separate analyses of the current operation for Wildfire impacts as this resource was not required at the time the previous EIR was prepared. A brief analysis of the wildfire risk of existing operations at the Project site was included in the *Hazards and Hazardous Materials* section of the 2019 EIR. The current mining operation was determined to have a less than significant impact related to the exposure of people or structures to a significant risk of loss involving wildland fires.

4.15.4 Thresholds of Significance

In accordance with CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the project. The following significance thresholds related to *Wildfire* have been derived from Appendix G of the CEQA Guidelines:

- *Substantially impair an adopted emergency response plan or emergency evacuation plan.*
- *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 wildfire.*
- *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.*

- *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.*

4.15.5 Impact Analysis

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

Project Impacts

Impact 4.15-1 The Project could Substantially Impair an Adopted Emergency Response Plan or Emergency Evacuation Plan.

An emergency plan describes a comprehensive emergency management system that provides for the planned response to disaster situations associated with natural disasters, technological incidents, terrorism, and nuclear related incidents. Lassen County and the City of Susanville use the *Emergency Operations Plan* (March 2019) to respond to major emergencies and disasters. The *Emergency Operations Plan* identifies a broad range of potential hazards and a response plan for each. The Lassen County Sheriff's Department, CHP, and other cooperating law enforcement agencies have primary responsibility for evacuations. These agencies work with the County Office of Emergency Services, and with responding fire department personnel who assess fire behavior and spread, which ultimately influence evacuation decisions. As of this time CAL FIRE, Lassen County Office of Emergency Services, Lassen County Sheriff's Department, and others have not adopted a comprehensive emergency evacuation plan applicable to this area.

All evacuations in the County follow pre-planned procedures to determine the best plan for the type of emergency. The designated County emergency evacuation and law enforcement coordinator is the sheriff. The evacuation coordinator is assisted by other law enforcement and support agencies in emergency events. Law enforcement agencies, highway/street departments, and public and private transportation providers would conduct evacuation operations. Activities would include law enforcement traffic control, barricades, signal control, and intersection monitoring downstream of the evacuation area, all with the objective of avoiding or minimizing potential backups and evacuation delays.

Another factor in the evacuation process would be a managed and phased evacuation declaration. Evacuating in phases, based on vulnerability, location, or other factors, enables subsequent traffic surges on major roadway to be minimized over a longer time frame and can be planned to result in traffic levels that flow more efficiently than when mass evacuations include large evacuation areas simultaneously. Law enforcement personnel and Lassen County Office of Emergency Services staff would be responsible for ensuring that evacuations are phased appropriately, taking into consideration the vulnerability of communities when making decisions.

The existing quarry is at the end of a private access road off of Ward Lake Road. The expansion area will be accessed from the current mining operation. The proposed Project does not include an increase in peak traffic volumes generated by the existing operation. As a result, the proposed quarry expansion will not interfere with the implementation of or physically interfere with an adopted emergency response or evacuation plan. Impacts are considered less than significant in this regard.

Impact 4.15-2: Due to Slope, Prevailing Winds, and Other Factors, the Project could Exacerbate Wildfire Risks, and thereby Expose Project Occupants to Pollutant Concentrations from a Wildfire or the Uncontrolled Spread of Wildfire.

The proposed quarry expansion does not include residential developments or permanent occupied structures. Residences in the Project vicinity are located downslope of the expansion area, and on agricultural parcels surrounded by fields. There are no residences or occupied land uses upslope of the Project site which is comprised of undeveloped agricultural and open space (public lands). The proposed expansion area, including areas surrounding the site are located in a Moderate FHSZ.

Wildfire factors such as slope and vegetation will change as mining progresses and areas of the site are reclaimed. Prior to material extraction, vegetation is removed creating barren areas during active mining. After completion of mining activities, the site will be reclaimed and revegetated.

Mining has resulted in changes in onsite topography, creating a steeper slope along the eastern boundary of the mining area and flat areas on the pit floor where plant equipment is currently operated. The risk of potential ignitions resulting from mining activities onsite would be considered very low for the existing cleared areas of the site with non-combustible land cover (mine production areas, rock crushing/screening plant, washing operations, ponds). The proposed Project will continue to maintain onsite fire suppression apparatus (i.e., water trucks and fire extinguishers) to assist in a fire-related response should an incident occur onsite.

Mining activities in the expansion area will result in an increase in slopes in the eastern portion of the expansion area as mining progresses. Proposed mine faces will be shaped to have a 50-foot highwall and 12-foot benches at a 1:1 slope and more gradual on the pit floor. These steeper slopes along the eastern boundary of the expansion area could potentially result in more rapid burn upslope if wildfire were to occur onsite after reclamation. However, the proposed Project is subject to Mine Safety and Health Administration (MSHA) requirements related to the implementation of Fire Prevention and Control standards (30 CFR Part 36). These measures are implemented onsite at the existing quarry and will be required in the expansion area as well. With the continued presence of onsite fire suppression equipment and continued implementation of MSHA standards impacts would be less than significant.

Impact 4.15-3: 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.

The existing mining operation is developed with the required infrastructure to support the proposed quarry expansion. The proposed quarry expansion will not require installation of fire breaks or additional water sources, power lines, or other utilities; however, will include

construction of internal roads within the expansion area for mining and material hauling. The internal roads are not anticipated to exacerbate fire risk at the site since vegetation will be removed prior to road construction and use. As a result, implementation of the proposed quarry expansion would not include the construction of any infrastructure that may exacerbate fire risk or result in temporary or ongoing impacts to the environment. Impacts are considered less than significant in this regard.

Impact 4.15-4: 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.

Development of the proposed Project would not significantly alter existing onsite drainage patterns or impervious services compared to existing conditions. As described in Section 4.11, *Hydrology and Water Quality*, the proposed Project contains several permitted settling basins near the north end of the existing mining area which drain into intermittent channels. The quarry site is made up of mostly fractured and weathered rock; therefore, the site is pervious and a majority of stormwater infiltrates. The flows within the existing mine area are contained and slowed by berms and benches and ultimately directed into settling basins.

The current mining operation does not discharge stormwater. A Notice of Non-Applicability (NONA) for the *General Permit for Storm Water Discharges Associated with Industrial Activities* (NPDES No. CAS000001) was submitted for the current mining operation in 2015. Standard soil erosion control protocols are currently practiced throughout the site include the use of berms, water bars, or rolling dips, rock check dams on roadway ditches, diverting run-on away from stockpile areas, installing stabilizers as necessary (silt fence, wattles, etc.), and directing runoff within quarry to detention ponds. The proposed Project will continue to implement Best Management Practices (BMPs) to reduce impacts to storm water quality. In addition, during the mine's operational history there have been no significance surface failures. Therefore, the proposed Project does not pose a significant risk of landslides.

Considering these project site features and characteristics, potential future post-fire conditions are not expected to increase risks associated with runoff and erosion. Considering the project site's phased reclamation and implementation of erosion control BMPs, potential impacts associated with runoff, post-fire slope instability, or drainage changes are considered less than significant.

4.15.6 Mitigation Measures

No mitigation measures are required.

4.15.7 Level of Significant after Mitigation

No mitigation measures are required. Impacts would be less than significant.

5.0 OTHER CEQA CONSIDERATIONS

CEQA Guidelines §15126 requires that all phases of a project must be considered when evaluating the impact on the environment: planning, acquisition, development, and operation. The growth-inducing impacts, significant and unavoidable adverse impacts, and significant irreversible environmental changes of the proposed Project are discussed in this section. Cumulative impacts are also discussed in this section as required by CEQA Guidelines §15130. Significant environmental effects and the mitigation measures proposed to minimize the significant effects are summarized in Chapter 2, *Executive Summary*, of the DSEIR.

5.1 Environmental Impacts Found to Have No Impact

Section 15128 of the CEQA Guidelines requires that an EIR “contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR.” Comments received during scoping have been considered in the process of identifying issue areas that should receive attention in the DSEIR. The contents of this DSEIR were also partially established based on the findings of three previous EIRs (May 1981 EIR [SCH No. 80062304]; 1997 EIR [SCH No. 1994051008]; and 2019 SEIR [SCH No. 2018022056]), including agency input received during the scoping process. Issues that were found to have no impact during the County’s scoping process include the following:

- *Mineral Resources.* California’s Surface Mining and Reclamation Act of 1975 (SMARA) requires the State Geologist to classify land into mineral resource zones based on the known or inferred mineral resource potential of that land. The primary goal is to ensure that important mineral resources do not become inaccessible due to uniformed land-use decisions. To this end, the California Geological Survey performs objective mineral land classification (MLC) to assist in the protection and wise development of California’s mineral resources (DOC, 2019). A search of the SMARA *Mineral Lands Classification* data portal did not show any MLC related studies or maps for Lassen County or the proposed quarry expansion. There are no designated mineral deposits of regional or statewide importance within the proposed quarry expansion.

The State of California has not designated an area of statewide or regional mineral resource significance within the proposed quarry expansion. In addition, the proposed quarry expansion is not delineated in the *Lassen County General Plan* or *Standish-Litchfield Area Plan* as a locally important mineral resource. As a result, implementation of the proposed Project will not result in the loss of availability of a mineral resource of value to the region or residents of the state or delineated locally important mineral resource. Therefore, the proposed Project will have no impact to mineral resources.

- *Population and Housing.* No new development or infrastructure is proposed as part of the quarry expansion and no additional employees are anticipated. In addition, no existing housing or people will be displaced by the proposed Project. Therefore, implementation of the proposed Project will have no impact to population and housing.

- *Public Services.* The proposed Project includes expansion of an existing mining operation. As a result, Project implementation will not increase the local population that, in turn, would require new or physically altered schools, parks, or other public facilities. Additionally, the proposed Project will not result in an impact to service ratios, response time or other performance objectives for fire or police protection which would require the construction of new or physically altered governmental facilities. Therefore, implementation of the proposed Project will have no impact to public services.
- *Utilities and Service Systems.* Implementation of proposed Project will not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities that would result in significant environmental effects. The proposed quarry expansion will utilize the same utilities and services as the current mining operation. Additionally, the proposed Project does not include any changes that will affect solid waste at the site. Water used for dust suppression will be provided by an existing well. As discussed in Section 4.11, *Hydrology and Water Quality*, the proposed Project will not create a demand for water in excess of available groundwater supplies. Therefore, implementation of the proposed Project will not result in impacts related to utilities or service systems.
- *Recreation.* The proposed quarry expansion does not include recreational facilities and would have no foreseeable impact on existing recreational facilities; neither will the proposed Project increase the need for recreational services, as no additional employees are proposed. Therefore, implementation of the proposed Project will have no impact to recreational resources within the County.

5.2 Environmental Impacts Found to be Less Than Significant

After further study and environmental review in this DSEIR, direct and indirect impacts of the proposed Project would be less than significant or could be reduced to less than significant levels with mitigation measures for the following issue areas:

The following subject areas have been identified as having a less than significant impact:

- Aesthetics and Visual Resources (Section 4.2)
- Agriculture and Forestry Resources (Section 4.3)
- Energy (Section 4.7)
- Greenhouse Gas Emissions (Section 4.9)
- Hazards and Hazardous Materials (Section 4.10)
- Hydrology and Water Quality (Section 4.11)
- Transportation (Section 4.14)
- Wildfire (Section 4.15)

The proposed Project would result in less than significant impacts with incorporation of mitigation measures on the following subject areas:

- Air Quality (Section 4.4)

- Biological Resources (Section 4.5)
- Cultural and Tribal Cultural Resources (Section 4.6)
- Geology and Soils (Section 4.8)
- Land Use and Planning (Section 4.12)
- Noise (Section 4.13)

5.1 Growth-Inducing Impacts

Sections 15126(d) and 15126.2(d) of the CEQA Guidelines require that an EIR analyze growth inducing impacts and state that an EIR should discuss the ways in which the project could foster economic or population growth or construction of additional housing, either directly or indirectly, in the surrounding environment. CEQA Guidelines require an EIR to “discuss the ways” a project could be growth inducing and to “discuss the characteristics of some projects that may encourage...activities that could significantly affect the environment.” However, the CEQA Guidelines do not require that an EIR predict (or speculate) specifically where such growth would occur, in what form it would occur, or when it would occur. The answers to such questions require speculation, which CEQA discourages; refer to CEQA Guidelines §15145.

It should be noted that growth inducing effects are not to be construed as necessarily beneficial, detrimental, or of little significance to the environment (CEQA Guidelines, §15126.2[d]). This issue is presented to provide additional information on ways in which the proposed project could contribute to significant changes in the environment beyond the direct consequences of developing the proposed land uses as described in earlier sections of this DSEIR.

The proposed Project will not result in any direct growth-inducing impacts as it entails a 76.8-acre mine expansion and an increase in annual production that will allow extension of the mining operation for an additional 20 years (until the year 2050). The proposed quarry expansion does not involve the construction of any new housing. In addition, the proposed Project will not create a substantial new permanent employment opportunity that will encourage people to move to the area for employment or result in the construction or extension of infrastructure to areas not previously served. Following completion of mining activities, the entire mine footprint will be reclaimed to open space and wildlife habitat. For these reasons, the proposed Project will not result in substantial growth inducement.

5.2 Significant and Unavoidable Adverse Impacts

Section 15126(b) of the CEQA Guidelines requires an EIR to discuss the significant impacts of a project that cannot be reduced to a less than significant level. These impacts are referred to as significant and unavoidable impacts of the project.

In Sections 4.2 through 4.15 of this DSEIR, the issue areas were analyzed to determine whether project implementation would result in a significant adverse environmental impact. Refer to those discussions for further details and analysis of the significant and unavoidable impacts identified below. Should the Lassen County approve the proposed Project, the County shall be required to cite its findings in accordance with CEQA Guidelines §15091 and prepare a Statement of Overriding Considerations in accordance with CEQA Guidelines §15093. The following impacts described below will remain significant and unavoidable after mitigation.

- *Biological Resources.* Expansion of the mining area by an additional 78.6 acres will increase the area over which light and noise impacts will occur causing additional displacement of mule deer and American pronghorn from noise and human activity. As discussed in the 1997 Deer Impact Analysis, human activity in the Project area would displace animals escaping mid-winter snow as well as taking advantage of late-winter and early spring plant phenology or the spring green-up due to noise and activity at the site. The proposed Project will result in these impacts occurring over a larger area than the current mining operation and for a longer duration (until 2050).

The proposed Project will continue to comply with the conditions of approval for Use Permit Amendment No. 2018-003 limiting mining activities from January 1st to March 31st each year, limiting activities occurring during nighttime hours, as well as requiring lighting to be downward facing and fully-shielded. These operating conditions will decrease the lighting and noise impacts within the expansion area. However, as discussed in previous CEQA review for Use Permit Amendment No. 2018-003, a seasonal closure from at least December through March was determined to be necessary to reduce the impacts due to displacement from noise and human activity to a less than significant level. The proposed Project will result in additional disturbance to pronghorn and mule deer. Human disturbance during a time of particular nutritional stress may effectively remove a portion of their winter range (Kucera, 1996). Because several hundred deer would potentially be affected and impacts will last for an additional 30 years (until 2050), this would be a significant environmental impact.

Adherence to Mitigation Measure 4.5-9 and Mitigation Measure 4.5-10 contained in Section 4.5, *Biological Resources* for the current operation will reduce displacement impacts to American pronghorn and mule deer; however, this impact will remain significant and unavoidable.

No additional mitigation measures are available for this impact. This is considered significant and unavoidable. An increased closure season of all operations onsite was determined to be economically infeasible. In 1997, the Lassen County Planning Commission recommended that the Lassen County Board of Supervisors amend the season of restricted operations due to economic infeasibility of a four-month closure. Economic losses said to potentially result from the four-month annual closure would impact the mine as well as the surrounding community; a disruption of mining operations would lead to a loss of employee payroll, place a higher demand on social services in the community, and reduce availability of mined materials in the surrounding area. An increased closure season of all operations onsite has been determined to be economically infeasible.

5.3 Significant Irreversible Environmental Changes

Section 15126.2(c) of the CEQA Guidelines requires that an EIR discuss the significant irreversible environmental changes that would occur with implementation of a project and that cannot be avoided. An irreversible impact is an impact that uses nonrenewable resources during the initial and continued phases of a project. Irreversible impacts may also result from damage caused by environmental accidents associated with a project. Irretrievable commitments of resources are also required to be evaluated, in order to ensure that such consumption is justified.

Determining whether the proposed Project would result in significant irreversible impacts requires a determination of whether key resources would be degraded or destroyed with little possibility of restoration.

Implementation of the proposed Project would result in the irreversible and irretrievable commitment of nonrenewable resources including water, oil, diesel, gasoline, and other nonrenewable resources and would extract existing nonrenewable aggregate resources.

Regarding aggregate resources on the Project site, as a result of productive use the proposed quarry expansion would result in the utilization, not loss, of known mineral resources of value to the region through the extraction and sale of the aggregate resources onsite. The continued use of the mineral resources extracted as part of the proposed expansion would make available the raw materials for projects that would be of value to the region and residents of the State for the next 20 years. Because the proposed Project would continue to produce and make these mineral resources available for beneficial use within Lassen County and residents of the State for up to 20 years, this commitment is not considered adverse. In addition, the commitment of fuel for increased Project-related truck trips and extended use of equipment over this time will not commit future generations to similar uses. Mining operations at the site will cease at the end of the mine life in 2050, truck hauling will cease, equipment will be removed from the site, and reclamation will be completed.

Mine reclamation is required by the California Surface Mining and Reclamation Act (SMARA). SMARA requires mines to be reclaimed to a usable condition that is readily adaptable for a productive alternative land use. The reclaimed mine must also create no danger to public health or safety. A Reclamation Plan Amendment has been submitted as part of the application materials in compliance with SMARA regulations, and is attached as Appendix B.

The proposed revegetation plan, which is part of the Reclamation Plan Amendment, identifies the revegetation goals and actions necessary to meet the obligations outlined in SMARA. In summary, revegetation efforts would reestablish native plant habitats that currently occur within and/or adjacent to proposed areas of surface disturbance. A native plant/seed collection and propagation program would be initiated to provide plant materials for the revegetation work. Monitoring and performance standards are included to assess revegetation performance and success. Revegetation maintenance would continue until planted areas were revegetated and established consistent with proposed success criteria for each revegetation area. A test plot program is specified to determine the best methods and techniques to achieve the revegetation objectives. In summary, Project implementation would access and distribute a necessary resource to the region (aggregate materials), and would ultimately result in the reclamation of the majority of the proposed Project site to a naturalized condition. As such, the proposed Project would not result in a significant irreversible effect.

5.4 Cumulative Impacts

A cumulative impact is an effect on the environment which results from the incremental impact of the proposed Project when combined with the effects of other past, present, and reasonably foreseeable future projects. The significance of a cumulative impact may be greater than the significance of individual effects resulting from the individual actions. This section evaluates the

reasonably foreseeable potential effects of other existing activities in the area (including other planned projects) when added to the impacts of the proposed Project.

Criteria for evaluating the significance of adverse effects are also applicable to cumulative impacts. The timing and duration of each activity is an important consideration for evaluating the potential cumulative effects of activities that occur only for a limited period. In those cases, a cumulative effect may occur only when two or more of the activities are occurring simultaneously.

The CEQA Guidelines provide that “Cumulative impacts shall be discussed when they are significant,” and that “the discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence...” (Section 15130[a] and [b]). This section considers the likelihood of such impacts and evaluates any significant effects. These effects, where they occur, are then evaluated for their impact in combination with other activities in the area for cumulative impact.

5.4.1 Other Projects in the Area

There are currently no known projects in the immediate Project vicinity aside from previously approved permits for the existing operation of Ward Lake Quarry. The following planned projects within Lassen County were identified from Lassen County agendas, packets, and announcements for upcoming meetings of the Planning Commission, Technical Advisory Committee, and Architectural Review Committee as well as Lassen County CEQA noticing. Items listed include those from meetings occurring April 2021 or later. Re-zoning and lot line adjustments are not included below.

- *Initial Study No. 2020-003, Use Permit Minor Amendment No. 2020-002, Reclamation Plan No. 2020-001.* Proposal for a Minor Amendment to the vested Hwy 36/Devil’s Corral Mine (Resolution No. 05-01- 10) and Reclamation Plan for a 9.2-acre construction aggregate surface mine. If approved, the minor amendment would allow for mining on an existing 5.29-acre vested mine in addition to a 3.91-acre spill-over portion not included in the vested right to mine Monday through Friday 6 a.m. to 4 p.m. The applicant estimates that there is approximately 300,000 cubic yards of material (construction aggregates) to be mined. The proposed end date of the mine is 2050, however, said material could be exhausted within less than ten years from the start of mining. Reclamation is proposed to initiate after mining is complete. The area to be reclaimed is approximately 9.2 acres. The proposed use after mining is timberland and/or open space.
- *Use Permit No. 2021-004 Santos.* Proposal to construct a second dwelling unit, under 1,400 square-feet in size.
- *Parcel Map No. 2021-002 Miller.* Proposal to divide a 10-acre parcel into two parcels: Proposed Parcels 1 and 2 would each be 5 acres in size.
- *Parcel Map No. 2021-003 Ross/ Stampfli.* Proposal to divide a 10-acre parcel into two parcels; the eastern and western proposed resultant parcels would each be 5 acres in size.

- *Use Permit No. 2021-002, Parcel Map No. 2021-001, Initial Study No. 2021-001, Gaji, Gondal.* Proposal to construct and operate a 30-space recreational vehicle park at Proposed Parcel A. To create the space needed for the RV park, the applicant proposes to relocate and expand an existing leach area. remove a separate existing leach area. and reroute the drainage easement existing on Parcels Band C. which were all approved through Parcel Map Application 1-01-90, recorded at Book 28, Pages 51 and 52 of the Official Records of Lassen County. CA. The applicant also proposes to reconfigure the property line common to both parcels; this will be accomplished through the parcel map application, although no additional parcels will be created (Parcels B and C will be reconfigured to create Proposed Parcels A and B). The subject parcels are zoned C-H (Highway Commercial District) and have a Commercial land use designation per the Hallelujah Junction Area Plan, 1984.
- *Use Permit No. 2020-003, Dowell.* Proposal to construct a 1,400 square-foot stick-built second dwelling unit, along with an attached 168 square-foot front porch. The subject parcel is zoned A-1 (General Agricultural District) and has either an “Intensive Agriculture” or “Extensive Agriculture” land use designation in the Lassen County General Plan, 2000. The proposed Project is exempt from the California Environmental Quality Act (CEQA) under Sections 15061(B)(3) and 15303 of the 2020 CEQA Guidelines. The subject parcel is located approximately 1.5 miles south of Nubieber at 548-343 Babcock Cinder Road, Nubieber, CA 96068.
- *UP No. 2020-007 Cunningham.* Proposal to relocate an existing “Ford” freestanding pole sign from the existing Susanville Ford Dealership to its approved expansion, the latter at 704-550 Richmond Road East, approximately three miles southeast of Susanville at the intersection of U.S. Highway 395 and California State Route 36. According to the applicant, the sign is 88 square feet in size.
- *Parcel Map No. 2019-001, Aboussleman, Stringer.* Proposal to divide a 111-acre parcel into four parcels: Proposed Parcel 1 would be 20.22 acres in size, Proposed Parcel 2 would be 21.11 acres in size, Proposed Parcel 3 would be 21.37 acres in size and Proposed Parcel 4 would be 48.08 acres in size.
- *UP No. 2020-006 J K Cunningham.* Proposal to place five signs at the approved Susanville Ford Dealership expansion at 704-550 Richmond Road East (across Richmond Road from the existing Susanville Ford dealership).
- *Use Permit No. 2020-005 Koch Living Trust.* Proposal to construct a 720-square-foot second dwelling unit. The project is located at 495-095 Highway 139, Susanville, CA 96130
- *Use Permit No. 2020-002 Long Valley Charter School, Fort Sage Unified School District.* Proposal to construct a 6,000-square-foot gymnasium/multipurpose building, three 1,152-square-foot modular buildings, a shop, a standalone restroom building, and a gravel parking lot to the rear of the property, to resurface and expand the existing paved parking lot, and to relocate the existing playground at the Long Valley Charter School site at 436-965 Susan Drive in Doyle, CA 96109.

- *Use Permit No. 2019-011 Woodcrest Real Estate Ventures.* The applicant is proposing to construct a 9,100-square-foot retail store off of Old Highway Road near Doyle. The project site includes two legal parcels. However, Technical Advisory Committee conditionally approved Merger No. 2019-008 on January 2, 2020, in order to merge the subject parcels. If this use permit is ultimately approved, the applicant will cause a Certificate of Merger to be recorded in the Official Records of Lassen County in order to finalize the merger.
- *Use Permit No. 2020-004, Hooper.* Proposal to construct a 50-megawatt photovoltaic solar array and a battery energy storage system (BESS) that would store 25 megawatts or 100 megawatt hours of electricity, along with related infrastructure. Such infrastructure would include a substation, a dead-end tower up to 90 feet tall, 24 130-foot tall steel gen-tie line poles to interconnect with the Plumas-Sierra Rural Electric 120-kV transmission line approximately 3 miles south of the project site, access roads, and perimeter fencing. The project has an approximate footprint of 278 acres, not including the proposed gen-tie lines. The subject parcels are located approximately nine miles northeast of Herlong off of Calneva Road, adjacent to the Nevada Border, and do not have addresses.

In addition, a search of the State Clearinghouse database was conducted for projects within Lassen County and the City of Susanville. Many of the projects in Lassen County include renewal of existing projects, scientific monitoring, or stream restoration projects. These projects are not listed unless located within a few miles of the Project site. Other projects include short term repair or construction projects. The additional projects within the County were identified from documents received by the State Clearinghouse since April 28, 2021:

- *AB 2551 Watershed Coordinator Grant - North East Subregion, Sierra Nevada Conservancy, 2021.* The Sierra Nevada Conservancy (SNC) would provide \$95,000 in funding for watershed coordinator activities in Modoc and Lassen counties per Assembly Bill 2551. Grantee will conduct outreach, education, and training in forest health and fire safety. Grantee will also participate in collaborative planning with partners and stakeholders to identify new landscape forest health and wildfire resiliency projects and contribute to a collaborative demonstration project with public and private land managers.
- *Noise Element Update and Ordinance (File No. 700.01.03), Lassen County, 2021.* As required by Government Code Section 5302(f), the Lassen County Department of Planning and Building Services has prepared a draft update of the 1989 Noise Element. There have been no alterations, revisions, or updates to the Noise Element since it was adopted in 1989. Approaches to noise exposure management have occurred between 1989 and the present, and therefore the County proposes to Update the Noise Element in order to make it more accessible to the general public and to simplify and clarify the application of included policies by County staff. The County also proposes to establish a new chapter in the Lassen County Code that provides standards and regulations for noise management, that would be informally referenced as the “Noise Ordinance.”
- *Hackstaff Bridges Project, California Regional Water Quality Control Board, Lahontan South Lake Tahoe Region 6 (RWQCB), 2021.* The replacement of two bridges in the same location they are currently located.

- *Seismic Monitoring Station, California Governor's Office of Emergency Services (OES), 2021.* This new station will contribute to the CA Earthquake Early Warning System (CEEWS) designed to potentially save thousands of lives during a large earthquake, prevent critical infrastructure damage and expedite recovery following a large earthquake. The network to which this sensor is connected will contribute real-time data to accurately record and warn people of strong shaking due to earthquakes in the region, and help provide records of ground motion that would be of immense scientific, engineering, and public safety value.
- *Thompson Peak Initiative Bootsole Forest & Watershed Restoration Project - SNC 1305, Sierra Nevada Conservancy.* The Sierra Nevada Conservancy would provide funding for hazardous fuels reduction treatments on the 4,233-acre project located on federal lands within the Plumas National Forest. Treatments would include ground-based mechanical thinning, hand thinning, hand piling, grapple piling, mastication, and prescribed burning of select conifers. The treatment goals are to reduce hazardous fuels and reduce risk to communities and the landscape from large and severe wildfires. Treatments would result in reduced stand density and would shift the species composition to a greater percentage of drought-tolerant, fire-resistant pine resulting in a landscape more resilient to wildfire, drought, and future climate conditions.
- *Poison Lake Curve Improvement - Seismic Survey, California Department of Transportation, District 2, 2021.* Caltrans is proposing a project to conduct survey adjacent to the roadway within the postmiles 6.5/7.1 in Lassen County on State Route 44. The survey consists of laying cable across the ground and attaching small geophones to the cable. The geophones record shock waves in the ground, which are used to determine the underlying soil layers. Shock waves are created by any combination of 3 methods: Striking a metal plate on the ground with a hammer, firing a blank shotgun shell in the bottom of a 24" deep hole that has been back filled and tamped. The purpose of the project is to gather information that will be utilized in a follow up curve improvement project.
- *Fish Advisory Signage, State Water Resources Control Board, Division of Financial Assistance, 2021.* The Project will administer a statewide program to assist Local Agencies in conspicuously posting health warnings in areas where contaminated fish or shellfish may be caught, including piers, jetties, lakes, reservoirs, & other areas where recreational/subsistence fishing is known to occur.
- *Slate Creek CIR, California Department of Transportation, District 2, 2021.* Using state funds, the California Department of Transportation (Caltrans) proposes an overlay project on SR 139 in Lassen county. The project is needed because the pavement has degraded to the point where maintenance is required to extend the service life. The purpose of the project is to preserve the roadway in a state where minimal maintenance is required, improve ride quality, and extend the service life of the existing pavement.
- *Clear Creek Fuelbreak 2021.* A vegetation fuel reduction project is being proposed on portions of Sierra Pacific Industries (SPI) properties in conjunction with CAL FIRE. The project is 315 acres, located approximately one mile west of the town of Westwood. The purpose of the proposed project is to maintain/establish a vegetation fuel reduction zone along or through portions of the landowner mentioned above.

- *Over Snow Vehicle Program-2020 Update.* The OHMVR Division previously certified an Environmental Impact Report (EIR) for the Over Snow Vehicle (OSV) Program, Program Years 2010-2020. OSV Program funds support motorized winter recreation via grooming snow trails on 26 designated trail systems in 11 national forests, maintenance of trailhead restrooms, and snow plowing access roads and parking areas. The OHMVR Division prepared an Addendum assessing the impacts of continuing Program funding after 2020. The Addendum did not find any new environmental impacts or identify the need for new mitigation.
- *2020 Digouts Service Contract.* In various counties and routes areas where the roadway has pavement in poor condition the project proposes to digout the area and replace with Hot Mix asphalt. This will be completed within the roadway prism to improve the surface until a more comprehensive project can be delivered.
- *Hackstaff Road Bridges Replacement Project.* Lassen County DPW will replace two existing Bridges on Hackstaff Road with similar structures in the same vicinity.
- *Long Valley Creek Crossing at Constantia Ranch.* The California Department of Fish and Wildlife has executed Lake and Streambed Alteration Agreement number EPIMS-LAS-13380-R1, pursuant to Section 1602 of the Fish and Game Code to SFT PROPERTY HOLDINGS I, LLC. The project is limited to reinforcement of a low water crossing across Long Valley Creek. Reinforcement will consist of installing a geogrid/nonwoven fabric combination across the road alignment to stabilize the roadway. Geogrid will be placed on top of 6-inches of base material. Ingress and egress will be keyed in with 12-inch diameter riprap material.
- *Townhill Brake Check.* Notice of Exemption for a proposed project to construct a mandatory brake check site adjacent to state route 36 in Lassen County at PM 22, two miles west of Susanville.
- *Acquire Land for Fort Sage and Rice Canyon OHV Areas.* Purchase 109.5 acres of privately owned parcels. The purpose of these purchases is to acquire private lands to sustain and manage current and future OHV use. Once the land is acquired OHV use will be managed under BLM regulations for OHV use. Currently OHV users trespass onto State and private lands to connect to BLM trails. Purchase of these parcels will solve trespass issues and will enhance the OHV area and allow for future development. This project does not include any development or ground disturbing activities. Additional environmental assessments with public scoping would take place prior to any development.
- *Encroachment Permit No. 0220-6UJ-0357 (Plumas-Sierra Rural Electric Cooperative's Elsyian Valley-Johnsonville Project.* The Plumas-Sierra Rural Electric Cooperative (PSREC) is proposing various improvements within Caltrans' right-of-way on Highway 395 in Lassen County at post mile 64. These improvements, which would provide broadband service to residents in the community of Lake Leavitt, include installation of buried fiberoptic and power cables along/under Highway 395, Installation of the buried fiber optic and power cables would be accomplished using horizontal directional drilling (HDD) and would require two bore pits, two three-inch risers, and two hand holes that would be placed flush

with the ground. The power and fiber optic cables would be installed between a depth of approximately 48” and 60” and would extend for approximately 300 lineal feet. The fiber optic and power cables would be encased in HDPE pipe that is 3” in diameter.

- *Bridge Maintenance in Lassen, Modoc, and Shasta Counties.* This project is needed as the 11 bridges in this project have experienced wear and damage as a result of traffic and the elements, thus shortening their expected life. The purpose of the project is to perform maintenance on these 11 bridges in order to extend their useful life.
- *Last Leg Cold in Place Recycling Project.* The California Department of Transportation (Caltrans), using state funds only, is proposing a Hot Mix Asphalt (HMA) pavement overlay project on State Route (SR) 139 in Lassen County from post mile (PM) 57.0 to 66.635 and on SR 139 in Modoc County from PM 0.0 to 0.12. The purpose of the project is to preserve the roadway in a state where minimal maintenance is required, improve ride quality, and extend the service life of the existing pavement. The project is needed because the pavement has degraded to a point where maintenance is required to extend its service life.

5.4.2 Cumulative Impact Analysis

The following resources were found to have no impact and are therefore excluded from the cumulative impacts evaluation:

- Population and Housing
- Mineral Resources
- Recreation
- Public Services
- Utilities and Service Systems

Aesthetics and Visual Resources

Aesthetic and visual resource impacts of the Project include mining activities in the previously undisturbed 78.6-acre expansion area. The geographic scope for cumulative visual resource impacts includes the viewsheds that will be affected by the proposed Project. These areas include the area from which mining operation in the expansion area are visible. The expansion area is visible from portions of Highway 395 and from approximately 55,000 acres to the west of the Project site. This geographic extent is appropriate as only those projects that can be viewed in the context of the proposed Project could contribute to cumulative visual effects.

Have a cumulative substantial adverse effect on a scenic vista?

As discussed in Section 4.2, *Aesthetics and Visual Resources*, the site is visible from Highway 395 for a total of up to 2 miles. Highway 395 is not a scenic highway. The site does not obstruct, interrupt, or detract from a valued focal point or panoramic vista, trail, or recreation area. Implementation of the proposed project have no impact to a scenic vista. Therefore, the proposed Project will not contribute to a cumulative impact to a scenic vista.

Substantially damage scenic resources including trees, rock outcroppings, and historic buildings within a state scenic highway?

The proposed Project is not located in an area that is designated as scenic highway. The proposed quarry expansion is visible from portions of Highway 395 for a distance of approximately 2 miles; however, Highway 395 is not a designated scenic highway. Additionally, the proposed project does not impact a designated landmark, historic resource, trees, or rock outcroppings of valued visual character. The proposed Project will not result in impacts to scenic resources within a state scenic highway; therefore, the impacts of the proposed Project are not cumulatively considerable.

Substantially degrade the existing visual character or quality of the site and its surroundings?

The towns of Litchfield and Standish are shielded from the mine by topographic features. The visual analysis determined that the proposed quarry expansion would result in impacts to lands to the west of the site. The majority of the parcels affected are large-tract agricultural properties. Project impacts are cumulatively considerable when combined with the impacts of the existing operation as well as the mine located on Bureau of Land Management (BLM) land to the south of the Project site. The proposed expansion area and current mining activities are visible from approximately the same areas. The expansion of the existing facility will be consistent with the existing visual character of the adjacent existing mining operation. As mining activities are completed areas will be reclaimed in both the existing and proposed mining areas. Implementation of the proposed Project will result in a less than significant cumulative impact to the existing character and quality of the site and surroundings.

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

The proposed Project will not create a substantial new source of light or glare. The quarry expansion will not result in an incremental impact related to light or glare and will not contribute to a cumulative impact related to light or glare which would adversely affect day or nighttime views in the area. Therefore, impacts related to light and glare are not cumulatively considerable.

Agriculture and Forestry Resources

Agriculture and forestry impacts of the proposed Project are cumulatively considerable in combination with other project impacts to agriculture or forest resources within Lassen County. The geographic scope for cumulative agriculture and forestry resource impacts in this analysis includes the entire County.

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

The site is not covered by a Williamson Act contract. The *Lassen County General Plan* allows for mining in areas designated as Extensive Agriculture. The proposed Project will not contribute to a cumulative impact related to the conflict with existing zoning for agricultural use or a Williamson Act contract. Therefore, impacts related to conflicts with existing zoning or agricultural use, or a Williamson Act contract are not cumulatively considerable.

Conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production or result in the loss of forest land or conversion of forest land to non-forest use?

The Project area is not forested and not zoned for forestland, timberland, or timber production zone. The proposed quarry expansion will not impact forestland. Therefore, implementation of the proposed Project will not contribute to a cumulative impact to forestland.

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

The proposed quarry expansion area does not meet the definition of prime agricultural land included in California Government Code Section 51201. Impacts were determined to be less than significant at the project level. Therefore, implementation of the proposed Project will not contribute to a cumulative impact related to conversion of Farmland.

Involve other changes in the existing environment that, due to their location or nature, could result in conversion of farmland to nonagricultural use?

As discussed in Section 4.3, *Agriculture and Forestry Resources*, implementation of the proposed quarry expansion will result in the loss of approximately 78.6 acres of low capability grazing land. This impact is cumulatively considerable in combination with the footprint of the existing mining operation as well as other projects in the county resulting in the conversion of agricultural land to nonagricultural use.

As stated in the *Lassen County General Plan*, mines, the extraction of minerals, and the ancillary processing of mineral materials generated on site, including the production of asphalt, ready-mix concrete and similar products will typically be deemed to be consistent with the “Extensive” and “Intensive Agriculture” land use designations and will not requiring zoning to an industrial zoning district, nor will they be interpreted by the County to constitute an agricultural conversion pursuant to the *Lassen County General Plan*. Once mining is complete, the expansion area and current mining area will be reclaimed in accordance with the Reclamation Plan Amendment to open space and wildlife habitat and will be available for use as grazing. Implementation of the proposed Project would result in a cumulatively less than significant impact in this regard.

Air Quality

The geographic context for cumulative air quality impacts for the proposed Project includes the immediate area surrounding the Project site as well as the Northeast Plateau Air Basin. This represents the geographic limit for cumulative air quality since air emissions have a regional effect. Pollutant impacts are cumulatively considerable when considered with other projects in the air basin and impacts related to toxic air contaminants are cumulatively significant considered with any project requiring the combustion of diesel fuel in the immediate Project vicinity. Odors are cumulatively considerable in combination with other sources in the immediate Project vicinity.

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

The Northeast Plateau Air Basin and Lassen County are currently in attainment or unclassified for all criteria pollutants. Therefore, the proposed Project will not contribute to a cumulatively considerable air quality impact regarding a pollutant for which the air basin is currently in non-attainment. Estimates of the air quality emissions generated by the proposed Project are included in Section 4.4, *Air Quality*. As noted in Section 4.3, the incremental daily emissions of ROG, CO, NO_x, PM₁₀, and PM_{2.5} are less than the significance thresholds. The incremental annual emissions of ROG, CO, NO_x, PM₁₀, and PM_{2.5} are less than the significance thresholds. The incremental change in emissions is solely related to the project elements associated with the aggregate plant and supporting activities (generator, unpaved travel, material handling, and blasting). The proposed Project is not expected to result in a violation of air quality standards. As required by Mitigation Measure 4.4-1 in Section 4.4, *Air Quality*, reasonable precautions will be taken to prevent particulate matter from becoming airborne. Additionally, implementation of the proposed Project will not contribute to a cumulative impact related to an air quality plan. With implementation of Mitigation Measure 4.4-1, Project operations would result in a cumulatively less than significant impact in this regard.

Expose sensitive receptors to substantial cumulative pollutant concentrations?

The only known current or future project within the vicinity of the proposed Project that could combine with the Project-related diesel particulate matter emissions to result in a cumulatively significant impact is a smaller aggregate mine located adjacent to and south of the site on BLM-administered land. The majority of any health impacts from mine operations are due to the operation of generators as haul truck emissions occur over the length of a haul route and are not near receptors for much duration. The adjacent mine does not have any concrete or asphalt plants or associated generators that would generate diesel particulate matter. Implementation of the proposed Project would result in a cumulatively less than significant impact in this regard.

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

Operation of the Project will result in fugitive dust and combustion emissions. The mine on BLM land adjacent to the Project site requires the use of heavy equipment and trucks that generate exhaust. There are no other additional sources of exhaust in the immediate Project vicinity.

The mining areas of the Ward Lake Quarry and the BLM mine where equipment is operated are more than 1,800 feet from the nearest receptors. Haul trucks will operate on the roadway within 100 feet of some receptors; however, trucks will not be near each receptor for much duration. In addition, the proposed Project does not include an increase in haul truck traffic. As discussed under Impact 4.4-4, odor emissions are highly dispersive, especially in areas with higher average wind speeds, with the primary wind direction from the west and south towards the project site.

A majority of the proposed Project operations would occur from April through October which is not typically the season associated with inversion conditions (i.e., occur during wintertime). Inversion conditions may also result in odor impacts due to air stagnation. Given that the proposed project would not operate during the months when inversion condition is more common, the likelihood of odor impacts due to the proposed project would be reduced.

Implementation of the proposed Project would result in a cumulatively less than significant impact in this regard.

Biological Resources

The geographic context for cumulative biological resource impacts is both regional and local. The geographic context for cumulative impacts includes the area immediately surrounding the Project site for direct habitat loss and displacement impacts due to human disturbance. The geographic context for cumulative impacts to pronghorn and mule deer includes the CDFW-designated critical winter-range habitat for mule deer and winter-range habitat for pronghorn antelope. As stated previously there are no known current or future projects identified in the vicinity of the Project by the County.

Have a substantial cumulative 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 DFG or U.S. Fish and Wildlife Service (USFWS)

Project impacts to special-status species are cumulatively considerable in combination with the existing mining operation at the Project site. The Ward Lake Quarry has been in operation since 1980 for rock, sand, and gravel removal and processing operations. The Project area is zoned as an upland conservation/resource management district by Lassen County, so this consistent disturbance is anticipated. These previous uses have changed the topography and vegetation of the site, thus changing available habitat within the Project area on an annual basis. The proposed quarry expansion would cause additional ground disturbance, but would enhance the brush communities, including sagebrush, bitterbrush, and rabbitbrush, on the site following conclusion of the Project and site reclamation. Both the expansion area and the existing mining area will be reclaimed. Many of the surrounding parcels are zoned as open space or upland conservation district, so reclamation of the site will create contiguous open space and wildlife habitat.

As discussed in Section 4.5, *Biological Resources*, the Project-level impacts to special-status species were determined to be less than significant with mitigation with implementation of Mitigation Measures 4.5-1 through 4.5-8. Mitigation measures include preservation of remaining habitat onsite to reserve remain wildlife habitat, avoidance of rare plant communities on the Project site, compensation of the loss of sensitive/rare plant communities, habitat enhancement, and bird nest avoidance. Coupled with the fact that there are no known current or future projects identified in the vicinity of the Project site by the County, cumulative impacts to special-status species would be less than significant in this regard.

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.

As discussed in Section 4.5, *Biological Resources*, impacts to mule deer and antelope include direct habitat loss and displacement from human disturbance. The temporary loss of 78.6 acres of habitat was determined to be less than significant at the Project-level. The loss of winter habitat resulting from the Project is cumulatively considerable in combination with the 160 acres of habitat loss from the current Ward Lake Quarry operation and additional direct habitat loss of mining activities on BLM property south of the Project site. The habitat disturbed by the existing operations and proposed expansion area will be restored in accordance with the Reclamation Plan

Amendment and habitat will be enhanced following the conclusion of mining; therefore, cumulative impacts related to direct antelope and mule deer habitat loss will be less than significant.

Displacement due to human disturbance of mule deer and antelope from important winter habitat was determined to be significant and unavoidable at the Project-level since displacement impacts occur over a larger area than direct habitat loss. This impact is cumulatively considerable in combination with the existing mining operation as well as the nearby BLM pit. The Project combined with the existing mining operations in the Project vicinity will result in a significant and unavoidable cumulative impact related to the displacement of mule deer and antelope from winter habitat.

Cultural and Tribal Cultural Resources

The geographic scope for cumulative impacts to cultural and tribal cultural resources includes past, present, and reasonably foreseeable projects as identified above in Subsection 5.4.1, *Other Projects in the Area*. This geographic limitation is appropriate as cultural resource impacts are generally localized, site specific and either individually impacted in a way that changes the significance of the resource or avoided.

The Project would cause a substantial adverse change in the significance of a historical or archaeological resource pursuant to §15064.5?

As discussed in Section 4.6, *Cultural and Tribal Cultural Resources*, the proposed Project could result in a substantial adverse change to a potential cultural resource identified within the expansion area (ALTA_PRE-01) as well as result in the adverse change in the significance of currently undiscovered cultural or archeological resources at the Project site. Implementation of Mitigation Measure 4.6-1 and Mitigation Measure 4.6-2 would ensure that Project-level impacts are reduced to a less than significant level. Project impacts are cumulatively considerable with other projects in the region. Other projects within the region would also be expected to have mitigation measures that would reduce potential impacts on historical or archaeological resources, and would require compliance with CEQA and/or Section 106 to consider and resolve significant impacts on cultural resources. Therefore, with implementation of Mitigation Measure 4.6-1 and Mitigation Measure 4.6-2, Project impacts related to historical or archaeological resources would be cumulatively less than significant.

The Project would disturb human remains, including those interred outside of formal cemeteries?

Project-level impacts related to the disturbance of human remains are potentially significant since it is possible human remains could be encountered over the course of mining activities. Mitigation Measure 4.6-3 is included for to ensure that impacts related to the disturbance of human remains would be less than significant. Therefore, with implementation of Mitigation Measure 4.6-3, Project impacts related to the inadvertent discovery of human remains would be cumulatively less than significant.

The Project would cause a substantial adverse change in the significance of a tribal cultural resource?

No tribal cultural resources have been identified on the Project site through tribal consultation under AB 52; however, the cultural resource identified within the expansion area (ALTA_PRE-01) is potentially eligible for the CRHR and could be considered a tribal cultural resource. The Project could result in a substantial adverse change in the significance of this resource. The Project could also result in a substantial adverse change in the significance of currently undiscovered tribal cultural resources if encountered over the course of mining resulting in a significant impact. Mitigation Measures 4.6-1 and 4.6-2 included in the Section 4.6. *Cultural and Tribal Cultural Resources*, would ensure Project-level impacts are less than significant. Other projects in the region would also be expected to reduce potential impacts on tribal cultural resources through AB 52 consultation, avoidance, or mitigation. Therefore, with implementation of Mitigation Measure 4.6-1, Mitigation Measure 4.6-2, and Mitigation Measure 4.6-3, impacts to tribal cultural resources would be cumulatively less than significant.

Energy

The geographic context for cumulative impacts related to energy consumption is both local and regional. As such, for purposes of the proposed Project, the cumulative setting for energy use includes Lassen County and the incorporated City of Susanville. This geographic extent is appropriate as it represents the region where the majority of transportation fuel is consumed.

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

The extension of the mining activities onsite for a 20-year period will continue the use of diesel fuel for generators, off-road equipment, and material-hauling trucks. The energy demands of equipment will increase proportionately to the increased production of the mine. The proposed Project will not result in an increase in permitted daily or maximum haul traffic. As discussed in Section 4.7, *Energy*, the proposed Project will not result in any unusual characteristics that would result in excessive long-term operational fuel consumption. All new trucks must meet new emission control guidelines. The Hat Creek Construction fleet is in change-out period for trucks. In addition, Hat Creek will be making improvements to the mixes of asphalt to be more energy and resource efficient, such as using reclaimed asphalt pavement (RAP) in mixes. The extension of time is not anticipated to increase the use of fuel and energy in a wasteful manner. The energy requirements of the proposed Project will not have a negative impact on regional energy supplies and will not result in the need for any additional capacity. The proposed Project will have no impacts on peak and base period demand for electricity and other forms of energy.

The energy consumption impacts of the proposed Project are less than significant. The proposed Project is not anticipated to combine with other projects to create a significant impact on local and regional energy supplies resulting in a need of additional capacity. Impacts are considered cumulatively less than significant in this regard.

Conflict or obstruct a state or local plan for renewable energy or energy standards?

The proposed Project will not conflict or obstruct a state or local plan for renewable energy resources or energy standards. The proposed Project will not contribute to a cumulative impact related to conflict with a state or local plan for renewable energy or energy standards.

Geology and Soils

Development projects are analyzed on an individual basis and must comply with established requirements of Lassen County and the California Building Standards Code as they pertain to protection against known geologic hazards and potential geologic and soil-related impacts. Analysis of cumulative impacts related to geology and soils takes into consideration the projects identified above in Subsection 5.4.1, *Other Projects in the Area*. This geographic extent is appropriate as geology and soil-related impacts are generally site-specific and are determined by a particular site's soil characteristics, topography, and proposed land uses.

Expose people or structures to potential substantial adverse effects, including 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?*
- ii. Strong seismic ground shaking?*
- iii. Seismic-related ground failure, including liquefaction?*
- iv. Landslides?*

The proposed Project will have a less than significant impact related to the exposure of people or structures to substantial adverse effects including risks of loss, injury, or death to the geologic hazards listed above. The proposed Project will not result in the creation of geologic hazards that will impact people or structures outside of the limits of the Project site. Project-level impacts were determined to be less than significant, are site specific, and will not contribute to a cumulative impact.

Result in substantial soil erosion or the loss of topsoil?

As discussed in the Section 4.8, *Geology and Soils*, the proposed quarry expansion has the potential to cause localized erosion through actions such as excavation, vegetation clearing and disturbing upland areas. Best management practices (BMPs) implemented at the project site and included in the Reclamation Plan Amendment will result in a less than significant project-level impact. In addition, stormwater runoff will not discharge from the site. The proposed Project will not contribute to a cumulative soil erosion or loss of topsoil impact.

Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?

The volcanic rock materials at the proposed Project site are not subject to liquefaction and the terrace deposits at the Project site are considered to have a low potential for liquefaction susceptibility or lateral spreading. Landslide hazards have not been identified onsite. As a result, Project-level impacts are considered less than significant. The materials of the current mining

operation adjacent to the proposed quarry expansion area are similar to that of the expansion area. Therefore, the proposed Project will not contribute to a cumulative impacts related to landslides, lateral spreading, subsidence, liquefaction, or collapse.

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?

The proposed quarry expansion area does not contain expansive soils as defined in Table 18-1 B under the Uniform Building Code of 1994. Since the Project site does not include expansive soils, the impacts of the proposed Project are not cumulatively considerable.

Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The proposed quarry expansion does not include the use of any septic tanks or alternative wastewater disposal systems. Since the Project site does not include the use of septic tanks or alternative wastewater disposal systems, the impact of the proposed Project is not cumulatively considerable.

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

Project-level impacts to unknown paleontological resources could be significant without mitigation incorporated. The mitigation measure included in Section 4.8, *Geology and Soils*, to avoid and minimize impacts to paleontological resources reduces the Project-level impact to be less than significant. Similar mitigation measures are implemented in the existing mining area as well. Mitigation of impacts through data recovery and avoidance where preservation is infeasible would be required for all other projects as well. The implementation of the proposed Project with the incorporation of mitigation measures contained in the DSEIR would reduce the potential cumulative impact of the proposed Project to a less than significant level. Implementation of the proposed Project would result in a cumulatively less than significant impact in this regard.

Greenhouse Gas Emissions

Generally, individual projects are insufficient by themselves to influence climate change or result in a substantial contribution to the global greenhouse gas (GHG) emissions inventory. GHG impacts are recognized as exclusively cumulative impacts. Emissions of GHGs have the potential to adversely affect the environment in a cumulative context. The emissions from a single project will not cause global climate change; however, GHG emissions from multiple projects throughout the world could result in a cumulative impact with respect to global climate change. The cumulative project list for this issue (climate change) comprises anthropogenic (i.e., human-made) GHG emissions sources across the globe, and no project alone would reasonably be expected to contribute to a noticeable incremental change to the global climate. However, legislation and executive orders on the subject of climate change in California have established a statewide context for developing an enforceable statewide cap on GHG emissions. Given the nature of environmental consequences from GHGs and global climate change, CEQA requires that lead agencies consider evaluating the cumulative impacts of GHGs, even relatively small (on a global basis) additions.

As a result, the extent of cumulative GHG emissions is defined as the Lassen County including the Northeast Plateau Air Basin as well as the State of California. Although GHG emissions have a global effect, this represents the geographic limit for cumulative GHG emissions since the focus of this analysis is compliance with State and regional GHG emission reduction targets.

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

The estimated annual incremental GHG emissions of the proposed Project would be approximately 61 metric tons of CO₂e, which is well below the significance threshold of 10,000 metric tons of CO₂e/year. Therefore, the proposed Project would have a less than significant impact to GHG emissions, directly or indirectly, on the environment. The incremental impacts of the proposed quarry expansion are less than significant and will not result in a significant cumulative impact.

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

Neither Lassen County APCD nor Lassen County have currently adopted a region-specific plan for reducing GHG emissions. As discussed in Section 4.9, *Greenhouse Gas Emissions*, GHG emissions generated by the proposed quarry expansion would not surpass the significance threshold of 10,000 metric tons of CO₂e per year. In addition, the operation of the facility is a benefit to Lassen County in that the maintenance of roads and other infrastructure requiring the generation of asphalt pavement and concrete are necessary for support of a safe public transportation system within Lassen County. The generation of pavement material and concrete are required whether located at this facility or other facilities further away. The transportation of materials from facilities further away would result in higher emissions per ton of material produced due to the increased emission from miles traveled by truck. As described in Section 4.9, *Greenhouse Gas Emissions*, the proposed Project would not conflict with any applicable plans, policies, or regulations adopted for the purpose of reducing the emissions of greenhouse gases. This impact would be less than significant. As a result, the proposed Project will not result in a cumulative impact that would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Implementation of the proposed Project would result in a cumulatively less than significant impact in this regard.

Hazards and Hazardous Materials

The health and safety hazards posed by most hazardous materials are typically local in nature. They generally do not combine in any cumulative sense with the hazards of other projects. Possible exceptions, however, include potential transportation of hazardous materials and waste disposal. The geographic scope for cumulative impacts to hazards and hazardous materials encompasses the projects as identified above in Subsection 5.4.1, *Other Projects in the Area*, and development within the City of Susanville and unincorporated Lassen County. For the transport of hazardous materials, the geographic scope of cumulative impacts considers local roadways that include Ward Lake Road, Center Road (A27), Leavitt Lake Road and the regional facility of Highway 395 within Lassen County. This geographic scope of analysis is appropriate because of influence of the area with wildfires, as well as the localized nature of hazardous materials impacts.

Create a cumulative a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials or through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Project-level impacts related to the transport, use or disposal of hazardous materials will be less than significant and will not be cumulatively considerable. There are no projects in the county that will combine with the proposed Project to result in a cumulative impact related to hazardous materials.

Expose people or structures to a significant cumulative risk of loss, injury or death involving wildland fires?

As discussed in Section 4.10, *Hazards and Hazardous Materials*, the Mine Safety and Health Administration (MSHA) requires implementation of Fire Prevention and Control standards (30 CFR Part 36). These measures are implemented at the current operation and will be required in the expansion area as well. The proposed Project will not expose people or structures to a significant risk or loss, injury or death involving wildland fires. The potential risk of wildfire is cumulatively considerable in combination with potential fire sources in the vicinity including the neighboring BLM mine, and neighboring agricultural and residential activities. With implementation of Fire Prevention and Control standards, the proposed quarry expansion will result in a less than significant contribution to a cumulative wildland fire impact. Implementation of the proposed Project would result in a cumulatively less than significant impact in this regard.

Hydrology and Water Quality

The geographic area considered for cumulative impacts to surface water, drainage, and flood hazards of the Deep Creek-Secret Creek watershed. This defined geographic area is appropriate as cumulative development may adversely affect downstream water quality and flood hazards. The geographic area considered for cumulative impacts to groundwater includes the entire Honey Lake Valley Groundwater Basin. This geographic extend is appropriate as the cumulative groundwater impacts are generally limited to the groundwater basin in which cumulative development would occur.

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

Project impacts to surface water are not cumulatively considerable since surface water quality impacts were determined to be less than significant and all surface water will be retained onsite. Project impacts to groundwater quality are cumulatively considerable with all projects in the Honey Lake Valley Groundwater Basin. According to a description of the Honey Lake Valley Groundwater Basin contained in *Bulletin 118*, poor quality water with high boron, arsenic, ASAR, total dissolved solids, fluoride, and nitrate levels occur between Litchfield and Honey Lake, and east of Honey Lake and north of Herlong. Some wells in the vicinity of Standish have high concentrations of arsenic. Locally, wells have high hardness, boron, fluoride, iron, ammonia, phosphorus, sulfate, manganese, sodium, calcium, chloride, and nitrate levels.

Water discharged from the gravel/aggregate washing operations onsite are retained in settling ponds. Implementation of the proposed Project will not result in changes to wash water management. The Project is subject to Conditions 4 and 5 of Resolution No. 97-067, requiring

all necessary permits from the Lahontan Regional Water Quality Control Board (RWQCB) and/or the State Water Resources Board (SWRB) be secured and Spill Prevention Control and Countermeasure (SPCC) plan for fuel storage be approved by the RWQCB. With these measures in place, the proposed Project will result in a less than significant contribution to groundwater quality impacts. Implementation of the proposed Project would result in a cumulatively less than significant impact in this regard.

Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level?

Project impacts related to depletion of groundwater were determined to be less than significant. As discussed in Section 4.11, *Hydrology and Water Quality*, within this basin, *Bulletin 118* estimates the total volume of water stored in the upper 100 feet of saturated basin-fill deposits and volcanic-rock aquifers to be 10 million acre-feet. Estimates of groundwater extraction for agricultural, municipal, and industrial, and environmental wetland uses are 51,000, 15,000, and 3,800 acre-feet, respectively. Deep percolation from agricultural-applied water is estimated to be 14,000 acre-feet. There is currently no trend or pattern indicating overdraft in the basin. No additional projects that would use a substantial amount of groundwater have been identified in the County. Implementation of the proposed Project would result in a cumulatively less than significant impact in this regard.

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 addition of impervious surfaces in a manner which would result in substantial erosion or siltation on-or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or offsite; 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 impede or re-direct flood flows?

Project impacts related to alteration of the existing drainage pattern of the site were determined to be less than significant. All stormwater will be retained onsite. There are no surface waters onsite and the proposed quarry expansion will not alter the course of a stream or river, nor include impervious surfaces. There is no 100-year flood hazard area onsite. Additional retention ponds will be constructed to capture surface flow as expansion advances and sized to meet the 25-year, 24-hour storm per the IGP and SMARA requirements. Project-level impacts were determined to be less than significant. The drainage impacts of the proposed quarry expansion would be confined to the mine footprint. Implementation of the proposed Project would result in a cumulatively less than significant impact in this regard.

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

The proposed quarry expansion is not in an area subject to inundation by seiche, tsunami, or mud flow. There is no 100-year flood hazard area onsite. The proposed Project was determined to have no impact and therefore not contribute to a cumulative impact related to the release of pollutants due to inundation from flood, tsunami, or seiche.

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

Project impacts are cumulatively considerable in combination with other projects within the Lassen County Groundwater Management Plan Area and Lahontan Region. Project-level impacts related to drawdown of ground water levels and degradation of water quality were determined to be less than significant. Therefore, the proposed quarry expansion will result in less than significant cumulative impacts related to conflict or obstruction of a water quality control plan or sustainable groundwater management plan.

Land Use

The geographic scope for cumulative impacts related to land use includes closely related past, present, and reasonably foreseeable future projects located in the surrounding area. The area influenced by cumulative land use effects related to adjacent parcels and the surrounding projects described above in Subsection 5.4.1, *Other Projects in the Area*. Related land use projects in the surrounding areas have been: 1) submitted for plan processing; 2) approved by Lassen County; and/or 3) engaged in active construction programs. This geographic extent is appropriate as land use impacts are generally localized and individual impacts of any future projects would be addressed on a project-by-project basis.

Conflict with Lassen County General Plan or Standish-Litchfield Area Plan?

The proposed Project will not result in changes within the current mining area of the Project site. The proposed expansion area is designated as “Extensive Agriculture” in the *Lassen County General Plan* and zoned U-P-A-C (Upland Conservation District/Agricultural Preserve Combining District). Mining activities and processing of natural mineral materials are allowable by use permit in this land use designation and zoning district. Project-level impacts related to land use goals and policies contained in the *Lassen County General Plan* or *Standish-Litchfield Area Plan* are less than significant.

The land use impacts of the Project are cumulatively considerable with other projects in the County that include development on land designated as “Extensive Agriculture.” However, since the proposed quarry expansion is an allowable use with a Use Permit within the existing land use and zoning district of the Project site and the expansion area and current mining area will be reclaimed to open space and wildlife habitat following mining, the proposed Project will not contribute to significant cumulative impact related to conflict with *Lassen County General Plan* or *Standish-Litchfield Area Plan*.

Noise

The geographic context for cumulative noise impacts is limited to the areas near the Project site or projects that would use the local roadways also used by Project-related traffic (Ward Lake Road, Center Road (A27), Leavitt Lake Road). For another project to contribute to a cumulative noise impact, it would need to be operational at the same time as the proposed Project.

Result in substantial temporary or permanent increase in ambient noise levels in excess of standards established in the Lassen County General Plan?

As discussed in the Section 4.13, *Noise*, plant operation noise levels and activities within the expansion area will not exceed Lassen County noise standards at nearby receptors. Project-level impacts were determined to be less than significant. Noise generated at the Project site is cumulatively considerable in combination with all other noise sources in the area. Noise from the existing mining operation was included in the Project analysis. There are no known future projects proposed in the vicinity of the proposed Project that would generate additional noise and result in noise level increases at nearby receptors. Noise generated from operation of the proposed Project will result in a less than significant cumulative impact.

Noise levels up to 65 dB will occur along area roadways from the maximum traffic volumes generated by the Project during peak operations. Noise levels up to 65 dB Ldn are conditionally acceptable and allowed by Use Permit Amendment No. 2018-003. As discussed in the Noise section of the DSEIR, the Project will not result in a significant increase in existing traffic noise levels over baseline conditions. Project-level impacts related to traffic noise were determined to be less than significant with implementation of mitigation measures. Noise from material haul truck operations is cumulatively considerable in combination with any future traffic increases through the year 2050. Traffic from the proposed Project results in the highest noise levels on Ward Lake Road and Center Road West of Ward Lake Road. Noise levels along these roadways are 64.6 and 65.0 dB Ldn, respectively. There are no known projects in the County that will result in increased traffic and traffic related noise on these roadways. Noise from material haul truck operations is also cumulatively considerable in combination with projected traffic increases through the year 2050.

California Department of Finance predicts that the population for Lassen County will not increase or decrease significantly during the lifetime of the County's *Regional Transportation Plan* (RTP) (through 2037). The Lassen County population, excluding the institutional population is expected to decrease at a rate of -0.22 percent per year between 2017 and 2037 (Green Dot, 2018). Traffic noise from the proposed Project is not anticipated to combine with future projects or traffic from population growth in the county to result in a significant cumulative impact.

Result in the exposure or persons to or generation of excessive ground borne vibration or ground borne noise levels?

The proposed quarry expansion does not result in the addition of any new equipment or processes to the existing mining area that will increase vibration or ground borne noise levels. Blasting at the Project site currently occurs more than 2,500 feet from the closest residence and blasting within the proposed expansion area will occur greater than 4,500 feet from the closest residence. As described in Section 4.13, *Noise*, vibration levels attenuate with distance from the source and would not be perceptible at the nearest residence located 4,500 feet from the proposed expansion area. Mitigation Measure 4.13-2 provides that no grading, blasting, or excavating will be allowed between the hours of 6:00 p.m. and 7:00 a.m. year-round. With implementation of Mitigation Measure 4.13-2, impacts related to groundborne vibration and ground born noise levels will be less than significant.

Vibration and groundborne noise from the Project are cumulatively considerable in combination with other sources adjacent to the site. The mining operations on BLM land south of the Project site sometimes has processing equipment onsite that could generate vibration, however the

equipment is located over 4,600 feet from the proposed expansion area. Increases in vibration from truck traffic are cumulatively considerable in combination with projected traffic increases through the year 2050. Loaded truck pass-bys produce vibration levels below human annoyance thresholds and below levels that could result in damage to structures along area roadways. With implementation of Mitigation Measure 4.13-2 impacts related to vibrations would be cumulative less than significant.

Transportation

The cumulative setting for transportation consists of traffic generated by all existing and future (cumulative) development in the project area including buildout of the *Lassen County General Plan*. The geographic context for cumulative impacts for transportation and traffic impacts includes the roadway network utilized by the proposed Project. Project traffic will continue to utilize Ward Lake Road, and Center Road (A27) to access Highway 395.

Cumulative transportation and traffic impacts were analyzed in the 2019 EIR and were determined to be less than significant. Existing traffic volumes were determined to not substantially degrade the level of service on any of the Project roadways and no additional turn lanes were determined to be required for traffic generated by the Project. The proposed Project will not increase or change the distribution of current traffic generated by the existing operation. Additional traffic increases of 1 percent over the proposed additional 20 operational years is not anticipated to degrade roadway or intersection capacity in the Project area to result in a cumulative impact to service standards contained in local circulation policies.

Conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)?

Project-level impacts related to vehicle miles traveled (VMT) were determined to be less than significant. The VMT generated by the Project is cumulatively considerable in combination with all VMT along the area roadways as well as the projected increase in VMT in the County that will occur over the life of the Project. Based on demographic growth projections of 0.9 percent per year for population, housing, and employment, countywide the average annual increase in daily VMT in the county is 0.9 percent per capita (Green Dot, 2018).

Lassen County does not have a significance threshold for total, per capita or VMT per employee. According the OPR Guidance, a finding of a less than significant project-level impact would imply a less than significant cumulative impact, and vice versa. This is similar to the analysis typically conducted for greenhouse gas emissions, air quality impacts, and impacts that utilize plan compliance as a threshold of significance (OPR, 2018). Project-level impacts related to VMT were determined to be less than significant; therefore, the proposed quarry expansion will likewise result in a less than significant cumulative impact related to VMT.

Wildfire

The geographic scope for cumulative impacts to wildfire hazards includes all of Lassen County. This geographic extent is appropriate because much of the unincorporated areas of Lassen County are located in or near a state responsibility area or lands classified as very high fire hazards severity zones.

The Project Could Substantially Impair an Adopted Emergency Response Plan or Emergency Evacuation Plan?

The proposed Project is located at the end of a private access road, will not result in an increase in traffic, and will not interfere with the implementation of or physically interfere with an adopted emergency response or evacuation plan. This impact is less than significant and will not combine with other projects in the area to contribute to a cumulatively significant impact.

Due to Slope, Prevailing Winds, and Other Factors, the Project Could Exacerbate Wildfire Risks, and Thereby Expose Project Occupants to, Pollutant Concentrations from a Wildfire or the Uncontrolled Spread of Wildfire?

As discussed in Section 4.15, *Wildfire*, without controls, mining equipment and processes could increase the risk of fire if operated near vegetated areas during the dry season. Vegetation will be removed from mining areas prior to material extraction. The Mine Safety and Health Administration (MSHA) requires implementation of Fire Prevention and Control standards (30 CFR Part 36). These measures are implemented at the current operation and will be required in the expansion area as well. Project-level impacts related to the exposure of people to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire were determined to be less than significant. Other projects occurring in the County will be required to comply with applicable federal state, and local laws related to fire prevention, design features and operational measures. Impacts are addressed on a Project-specific basis and would not result in a significant cumulative impact.

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?

Multiple projects in the County could require installation of infrastructure, including the proposed construction of a solar array and battery energy storage system that will require construction of transmission lines. The proposed Project does not include construction of any infrastructure that may exacerbate fire risk or result in temporary or ongoing impacts to the environment. Therefore, the Project will not combine with other projects to result in a significant cumulative impact.

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?

There have been no fires in the vicinity of the Project site that would result in downstream flooding, landslides, runoff, post fire slope instability, or drainage changes affecting the Project site. Therefore, the proposed quarry expansion will not expose people or structures to significant risks. Project-level impacts were determined to be less than significant. Impacts of this nature are Project-site specific and not cumulatively considerable.

6.0 ALTERNATIVES

The California Environmental Quality Act (CEQA) requires that “an EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives” (CEQA Guidelines §15126.6). This chapter identifies potential alternatives to the proposed project and evaluates them, as required by CEQA. Key provisions of the CEQA Guidelines on alternatives (§15126.6(a) through (f)) are summarized below to explain the foundation and legal requirements for the alternatives analysis in the DSEIR.

- “The discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly” (§15126.6(b)).
- “The specific alternative of ‘no project’ shall also be evaluated along with its impact” (§15126.6(e)). “The no project analysis shall discuss the existing conditions at the time the Notice of Preparation is published, and at the time the environmental analysis is commenced, as well as what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the ‘no project’ alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives” (§15126.6(e)(2)).
- “The range of alternatives required in an EIR is governed by a ‘rule of reason’ that require the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project” (§15126.6(f)).
- “Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent)” (§15126.6(f)(1)).
- For alternative locations, “only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR” (§15126.6(f)(2)(A)).
- “An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative” (§15126.6(f)(3)).

Per the CEQA Guidelines §15126.6(d), additional significant effects of the alternatives are discussed in less detail than the significant effects of the project as proposed.

The intent of this section is to evaluate alternatives capable of eliminating or substantially lessening significant impacts associated with the proposed Project. For this Project, two alternatives are evaluated:

- No Project Alternative (which consists of operations at the site remaining as currently permitted by Use Permit No. 96056 and Use Permit Amendment No. 2018-003).
- Reduced Expansion Alternative.

The discussions in this section identify only substantial changes in Project impacts anticipated with each alternative, as compared to the proposed Project. Resource areas not impacted by the proposed quarry expansion are not discussed in detail.

Descriptions of these alternatives are described below as well as a discussion of their impacts and how they would differ from the significant impacts of the proposed Project. In addition, a discussion of alternatives considered but rejected from further consideration and a discussion of the environmentally superior alternative are included below.

6.1 Factors in the Selection of Alternatives

Materials produced at the site include asphalt, concrete, various sizes of crushed rock and crushed base rock which are used as construction materials. The materials at the site have been evaluated both an independent testing laboratory and the California Department of Transportation (Caltrans) with test results indicating superior material not commonly found in the region. The quality of the resources and choice location to the existing and potential market aggregates and paving materials were the determining factors in choosing the site for the planned operations in 1981 (Miller's Custom Work, 1981).

CEQA Guidelines §15126.6 recommends that an EIR describe the rationale for selecting alternatives to be discussed. Alternatives were considered that would avoid or lessen any significant effects for the proposed Project and that could achieve most of the Project objectives. The alternative must also be feasible from an economic, environmental, legal, and technological standpoint.

6.2 Alternatives Considered but Rejected from Further Consideration

Section 15126.6(c) of the CEQA Guidelines permits the elimination of an alternative from detailed consideration due to:

- Failure to meet most of the basic project objectives;
- Infeasibility; and
- Inability to avoid significant environmental impacts.

Section 15126(f)(1) of the CEQA Guidelines states that “Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries...and whether the proponent can reasonably acquire control or otherwise have access to the alternative site. No one of these factors establishes a fixed limit on

the scope of reasonable alternatives.” In addition, the California Supreme Court has stated that lead agencies, not project opponents, have the burden to formulate alternatives for inclusion in an EIR.

Two potential alternatives to the proposed Project that were initially considered but determined not to be viable and eliminated from further consideration are described below:

Alternative Project Location

CEQA Guidelines §15126.6(f)(2)(a) states that “only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.” An alternative location would require the identification and design of a quarry and aggregate processing facilities at another location within the Project region capable of producing up to 5 million tons of aggregate annually, or the identification of multiple quarry locations that could achieve that combined capacity. Successful development of a quarry and processing facilities at an alternative location would depend on a number of geologic, environmental, and economic factors. Site-specific studies would be required to evaluate a new site and its adequacy to support mining and processing operations. Issues to be addressed for a new site are dominated by availability and suitability. The site must be available for purchase or long-term lease with abundant aggregate resources to justify the investment necessary to permit and operate an alluvial rock quarry. Extensive overall feasibility studies would need to be prepared to evaluate the following environmental and logistical concerns:

- quality and quantity of aggregate resource and its suitability to meet construction specifications for concrete and asphalt;
- water supply availability;
- electricity service availability;
- distance to markets and potential increases in haul truck trip distances;
- available truck routes, road design, and existing and predicted future traffic volumes and levels of service;
- proximity to a state highway;
- existing and future surrounding land uses;
- effects of the mining and processing plants on these surrounding land uses, including aesthetics, air pollutants, light, and noise;
- potential impacts to groundwater and surface water quality and consumption;
- potential impacts to biological resources including special-status species and their habitat;
- potential presence of and impacts to significant cultural and paleontological resources; and
- options and costs for reclamation and use of site after mining.

No specific location with attributes necessary to accomplish the project objectives is known in enough detail to be identified as a specific alternative site. Because of the multiple and underdetermined site conditions that could exist at an alternative location, the County does not possess sufficient information to determine whether potential mining and processing sites at alternative locations are available to feasibly meet the project objectives.

Further, the proposed Project is located at an existing quarry and processing plant site. The Project's expansion provides for energy, cost, and other efficiencies achieved through expansion of the existing operation, and use of existing facilities. These efficiencies would not be achieved through development of one or more quarries at a new quarry location. For the reasons discussed above, the County has eliminated alternative locations from further consideration.

Alternative Expansion Area

An alternative expansion area was considered but rejected from further consideration. The area to the east of the existing operation was initially considered for the expansion. However, after initial exploration, it was determined the superior rock material was not present east of the current mining boundary. In addition, this alternative would not reduce or avoid the significant and unavoidable biological impacts of the proposed Project.

6.3 Project Objectives

The Project applicant has identified the following objectives for the proposed Project:

- Provide a local construction material supply to serve local and regional market demands.
- Provide a local source of materials for emergency jobs (during federal, State, or County declared emergencies) and other construction jobs requiring nighttime work.
- Extend the life of the quarry to extract additional superior materials from the site.
- Contribute to the improvement of the Lassen County economy by expanding an existing project that increases sales taxes.
- Expand an existing quarry operation without the need for either a County General Plan or Zone Amendment.

6.3 No Project Alternative

6.4.1 Description

The No Project Alternative includes the continuation of mining operations at the site as currently permitted under Use Permit No. 96056 and Use Permit Amendment No. 2018-003. Activities would continue to occur within the existing 138-acre mining boundary. Annual production would be limited to 100,000 tons except to supply emergency jobs. Mining activities would cease by the year 2030 and the mining area would be reclaimed.

6.4.2 Impacts

Under the No Project Alternative, environmental conditions at the site would remain as they currently exist. The No Project Alternative would eliminate the additional significant displacement impacts of the proposed Project to pronghorn and mule deer. The existing impacts to pronghorn and mule deer from the current operation would continue to occur until the mining area is reclaimed. The No Project Alternative would eliminate all other potential impacts of the proposed Project. Demand of local and regional construction projects in excess of 100,000 tons per year would be supplied by an alternate source. Depending on the location of the alternate source, the No Project Alternative could result in an increase in greenhouse gas emissions, vehicle miles

traveled, and air quality impacts if the source is located a greater distance from the construction projects than the Ward Lake Quarry.

6.4.3 Conclusion

The No Project Alternative would eliminate the additional significant impacts to pronghorn and mule deer of the proposed Project, but would not fully meet the Project objectives. The No Project Alternative may not achieve the first Project objective of meeting construction material demands of local and regional markets. The applicant has determined the current demand from their facility is up to 200,000 tons of construction material per year and the current operation is permitted for an annual production of 100,000 tons per year (except to provide materials to emergency projects). The No Project Alternative would meet the second Project objective until the end date of mining which is currently 2030. Beyond that date, material for emergency jobs would be provided by an alternate source. The No Project Alternative would fail to meet the third objective of extending the life of the quarry to extract additional superior materials from the site. Up to 5,000,000 tons of additional superior material would remain unused.

6.5 Reduced Expansion Alternative

6.5.1 Description

This alternative is similar to the proposed Project, but with a reduced expansion area and shorter mine life. As with the proposed Project, annual production would increase from 100,000 tons to 200,000 tons. The Reduced Expansion Alternative includes expansion of the mining area of the current operation to include an additional 26 acres. Due to the smaller expansion area, the life of the mine would be extended only 10 years. Mining would occur until 2040 and then the site would be reclaimed.

The location of the processing area of the operation would not change. Mining would occur as described for the proposed Project, but within the smaller expansion area. Mining activities in the expansion area would start immediately adjacent to the current mining area of the Project site and progress to the north. This alternative would require the same equipment operating at the same capacity as the proposed Project. The same average and maximum traffic volumes would be required to haul materials.

6.5.2 Impacts

Aesthetics and Visual Resources

The Reduced Expansion Alternative would increase the mining area of the current operation by 26 acres. This alternative would result in similar visual impacts compared to the proposed Project, but within a smaller area. The Reduced Expansion Alternative could also be visible from a smaller area surrounding the Project site and reclamation of the mine would occur 10 years earlier compared to the proposed Project. Similar to the proposed Project, the aesthetic and visual resource impacts of the Reduced Expansion Alternative would be less than significant.

Agriculture and Forestry

Similar to the proposed Project, the Reduced Expansion Alternative would have no impact related to conflict with an existing zoning for agricultural use or a Williamson Act contract and would have no impact to forestland or important farmland. The Reduced Expansion Alternative will result in the loss of 26 acres of low capability grazing land, but no important farmland. Similar to the proposed Project, the agricultural and forestry impacts of the Reduced Expansion Alternative would have no impact.

Air Quality

The Reduced Expansion Alternative would not change the daily or annual emissions compared to the proposed Project. The same equipment and traffic volumes would be required to achieve the maximum annual production volume of 200,000 tons per year. The Reduced Expansion Alternative would reduce the duration of time emissions from the operation would occur by 10 years compared to the proposed Project. Similar to the proposed Project, air quality impacts of the Reduced Expansion Alternative would be less than significant.

Biological Resources

Impacts to biological resources under the Reduced Expansion Alternative would be reduced when compared to the proposed Project. This alternative would decrease the duration of biological resource impacts by 10 years. This alternative includes a smaller expansion area than the proposed Project in which vegetation would be removed and ground disturbance would occur for material extraction. The reduced expansion area would reduce indirect impacts and direct habitat impacts to special status species, mule deer, and pronghorn antelope, however impacts would remain significant without mitigation. Displacement impacts to pronghorn and mule deer would remain significant and unavoidable.

Cultural and Tribal Cultural Resources

The Reduced Expansion Alternative mining area contains one isolated find and no known cultural resources. Impacts to currently undiscovered cultural resources, archaeological resources, tribal cultural resources, or human remains could occur during mining activities in the 26 acre expansion area. The reduced expansion area impacts to cultural and tribal cultural resources would require similar mitigation as proposed by the Project. Similar to the proposed Project, impacts would remain less than significant.

Energy

The Reduced Expansion Alternative would require the same annual energy requirements during operation as the proposed Project. However, the overall energy use of the Reduced Expansion Alternative would be less than the proposed Project since mining would end in 2040 instead of 2050. Similar to the proposed Project, energy impacts of Reduced Expansion Alternative would be less than significant.

Geology and Soils

The geology and soil impacts of the Reduced Expansion Alternative would be similar as those of the proposed Project, but would occur over a smaller area. Impacts related to geologic hazards and stability would be less than significant and no impacts related to expansive soils and wastewater disposal systems and septic tanks would occur. Impacts related to erosion of topsoil and paleontological resources and unique geologic features would be less than significant with the incorporation of mitigation similar to the proposed Project.

Greenhouse Gas Emissions

The Reduced Expansion Alternative would result in the same daily and annual greenhouse gas emissions as the proposed Project, however overall emissions from this alternative would be reduced since mining activities would cease in 2040. Similar to the proposed Project, the Reduced Expansion Alternative would result in less than significant greenhouse gas emission impacts.

Hazards and Hazardous Materials

The Reduced Expansion Alternative will have the same hazards and hazardous material impacts as the proposed Project. The Reduced Expansion Alternative will require the transport, use, storage, and disposal of the same hazardous materials used for the existing operation and proposed Project. Hazardous materials would be handled, stored, and transported in accordance with applicable laws and regulations. Fire prevention and control standards would ensue risks due to wildland fires are less than significant. Similar to the proposed Project, the Reduced Expansion Alternative would result in less than significant impacts related to hazards and hazardous materials.

Hydrology and Water Quality

The hydrology and water quality impacts of the Reduced Expansion Alternative would be the same as the impacts of the proposed Project. The 26 acre expansion area of the Reduced Expansion Alternative would include the southern half of the expansion area of the proposed Project. The expansion area would not be within a flood hazard area and would not expose people or structures to flooding or inundation by seiche, tsunami or mudflow. No surface waters would be impacted within the expansion area and all stormwater and wash water would be retained onsite. Groundwater use would not create a demand for water in excess of available supplies. Similar to the proposed Project, the Reduced Expansion Alternative would result in less than significant impacts to hydrology and water quality.

Land Use

The Reduced Expansion Alternative could potentially conflict with the same land use policies contained in the *Lassen County General Plan* and *Standish-Litchfield Area Plan* as the proposed Project. Land use impacts of the Reduced Expansion Alternative would be potentially significant without mitigation. Mitigation measures similar to those of the proposed Project for biological resources would be required for the Reduced Expansion Alternative. Similar to the proposed Project, land use impacts of the Reduced Expansion Alternative will be less than significant.

Noise

The Reduced Expansion Alternative would result in similar noise impacts as the proposed Project. The Reduced Expansion Alternative does not include changes to plant operational noise levels or traffic noise levels. Existing equipment used for material extraction at the current operation will be used in the expansion area. Equipment operated in the expansion area will be operated further from the residences than equipment operated within the current mining area and will result in lower levels of noise and vibration at the location of the nearest receptor. Similar to the proposed Project, noise impacts of the Reduced Expansion Alternative will be less than significant.

Transportation

The Reduced Expansion Alternative would generate the same average and maximum traffic and VMT as the proposed Project during operation. The expansion area would be accessed from the existing mining operation. The Reduced Expansion Alternative would not result in a conflict with local programs, plans, ordinance, or policies, will not increase traffic hazards, or result in inadequate emergency access. Similar to the proposed Project, traffic impacts of the Reduced Expansion Alternative would be less than significant.

Wildfire

As with the proposed Project, wildfire risks from the Reduced Expansion Alternative will be less than significant with prevention control standards currently practiced at the existing operation. The Reduced Expansion Alternative will not impair an emergency response plan or evacuation plan, or expose people or structures to significant risks. The Reduced Expansion Alternative would result in less than significant impacts related to wildfire.

6.6 Conclusion

The Reduced Expansion Alternative will result in similar impacts as the proposed Project, however impacts would occur for a shorter duration since under this alternative the life of the mine would be extended to 2040 instead of 2050. Direct impacts would occur within a smaller area. Overall pollutant and greenhouse gas emissions generated by the reduced expansion would be less than proposed Project due to the shorter duration of operations; however, the daily and annual emissions would remain the same during the operational period of the Reduced Expansion Alternative. The reduced expansion area does not include known cultural resources; therefore, mitigation measures to avoid impacts to a known cultural resource would not be required. However, mitigation measures for currently undiscovered cultural and tribal cultural resources as well as human remains would be required to reduce impacts to a less than significant level. As with the proposed Project, impacts related to air quality, biological resources, land use and geology will be potentially significant without mitigation. Impacts related to displacement of pronghorn and mule deer will remain significant and unavoidable.

The Reduced Expansion Alternative would meet the first two Project objectives of providing a local construction material supply to serve local and regional market demands and to provide a local source of materials for emergency jobs and other jobs requiring nighttime work during until the year 2040. Beyond the date of 2040, material for local and regional construction jobs, including emergency jobs would be provided by an alternate source, which may be located a greater distance

from local and regional construction sites. The Reduced Expansion Alternative would partially meet the objective of extending the life of the quarry to extract additional superior materials from the site since the life of mine would be extended 10 years from the current end date (to the year 2040). Up to 2,500,000 tons of additional material could be extracted from the 26-acre expansion area. This alternative would leave as much as 2,500,000 tons of superior material unavailable for use.

6.7 Environmentally Superior Alternative

CEQA Guidelines §15126.6 requires that the alternatives analysis must identify the “environmentally superior” alternative among the alternatives considered. The “no project” alternative would eliminate all of the impacts of the proposed Project at the Project site and would be the environmentally superior alternative. However, the “no project” alternative does not fully meet the Project objectives. In addition, CEQA Guidelines require that if the “no project” alternative is the environmentally superior alternative, the EIR must also identify the environmentally superior alternative among the other alternatives.

As discussed above, the Reduced Expansion Alternative would result in similar impacts as the proposed Project, but would reduce the area and time period over which impacts occur. The known cultural resource in the Project vicinity would be avoided in the smaller expansion area under the Reduced Expansion Alternative and no mitigation specific to the known cultural resource would be required. Impacts to aesthetics and visual resources, biological resources, and geology and soils would be slightly reduced due to the smaller expansion area, but the level of significance of these impacts would not change. The mitigation measures required under the proposed Project would still be necessary for cultural and tribal cultural resources, geology, land use and air quality to reduce impacts of the Reduced Expansion Alternative to be less than significant. The mitigation measures included for biological resources will also be required to reduce impacts to biological resources, however impacts related to displacement of mule deer and pronghorn will remain significant and unavoidable.

The overall and cumulative impacts of the Reduced Expansion Alternative would be reduced when compared to the proposed Project due to the smaller expansion area and shorter operational period. Therefore, in lieu of the “no project” alternative; the Reduced Expansion Alternative would be the environmentally superior alternative. However, it should be noted that the Reduced Expansion Alternative would only partially meet the Project objectives of the Project since it would result in less overall material being provided by the operation and materials would be supplied for a shorter duration of time. The Reduced Expansion Alternative would leave up to 2,500,000 tons of superior material unavailable for use for local and regional projects that could be efficiently extracted and processed using the existing equipment and infrastructure currently at the Project site.

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