ADMINISTRATIVE DRAFT

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SUBSEQUENT ENVIRONMENTAL IMPACT REPORT

WARD LAKE QUARRY
MINING AND RECLAMATION PLAN AMENDMENT
DECEMBER 2020 MINE BOUNDARY AMENDMENT

Prepared for

Lassen County

Prepared by

VESTRA Resources Inc.
5300 Aviation Drive
Redding, California 96002

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1.0 INTRODUCTION

1.1 Purpose of Environmental Impact Report

This Draft Subsequent Environmental Impact Report (DSEIR) has been prepared to evaluate the impacts associated with Use Permit Amendment 2021-___ and Reclamation Plan Amendment 2021-___ addressing mine boundary expansion at the Ward Lake Quarry (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 2018-001 adopted in 2019.

This proposed 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 51 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

In accordance with CEQA Guidelines Section 15121(a), the purpose of this Subsequent EIR 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

Three previous EIRs have been prepared for mining operations at the Project site. These include the completion of an EIR in May 1981 (SCH #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 #1994051008). An additional EIR (SCH #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 (Project) 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.

1.2 Subsequent EIR

Pursuant to CEQA Guidelines Section 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

Above finding 3B, that only minor additions or changes would be necessary to make the previous EIR adequately apply, cannot be made because of the following:

- The amendment would disturb an additional 51 acres of site area.
- The amendment would extend the life of the mine an additional 20 years.
- The amendment would increase the allowed annual removal volume to 200,000 tons.

The DSEIR has been prepared to evaluate the impacts related to the substantial changes in the Project from the currently approved mining operation.

1.3 Environmental Review Approach

The project includes operational changes to an existing mining facility. The mining operation has been analyzed in three previous environmental documents. This DSEIR will focus on any potential new significant impacts and/or increases in severity of impacts from those previously identified in the previous EIRs.

This DSEIR addresses subject areas determined to have potentially significant and less-than-significant environmental impacts due to revised operations. The baseline for environmental review is the currently permitted activity at the site and all associated conditions and restrictions. Following review of proposed changes, the project could result in potentially significant impacts on the following subject areas:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural and Tribal Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Transportation
- Wildfire

Potential impacts associated with the following issues were identified as having no impact:

- Mineral Resources
- Population and Housing
- Recreation
- Public Services
- Utilities and Service Systems

This DSEIR will focus on any potential new significant impacts and/or increases in severity of impacts from those previously identified in the 1981, 1997, and 2019 EIRs prepared for operations at the site.

1.4 Documents Incorporated by Reference

CEQA Guidelines Section 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. The documents listed below are incorporated by reference as source documents for this EIR.

Pursuant to CEQA guidelines Section 15150(e)(f), these documents were used primarily to describe the environmental setting, provide general background material, or communicate descriptive technical material.

1.4.1 Operation of Aggregate Materials Source, Operation of Rock Crushing Plant, Operation of Asphalt Concrete Batch Plant EIR (SCH #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. The document is available on the county website.

The EIR identified the following impacts of the Project to be significant and unavoidable:

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

1.4.2 Miller's Custom Work, Inc., Ward Lake Pit Expansion EIR (SCH #1994051008)

Miller's Custom Work, Inc. Ward Lake Pit Expansion Environmental Impact Report (Ward Lake Expansion EIR), SCH #199405108, 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 #79-80-44, #11-02-85, and #94032, and Reclamation Plan #94032. The document is available on the county website. The project analyzed in the EIR included:

1. 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).
2. Onsite production of ready mix concrete added to the use permit as an allowed use.
3. 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.

4. 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

1.4.3 Hat Creek Construction and Materials, Inc., Modifications to Ward Lake Quarry Operations EIR (SCH #2018022056)

Hat Creek Construction and Materials Inc, Modifications to Ward Lake Quarry Operations Subsequent Environmental Impact Report, SCH #2018022056, was prepared in 2019. The Project analyzed in the EIR included amendments to the operations at the site. The amendment included the following changes to existing permitted operations at the quarry:

1. 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)
2. Extend the life of the mine from 2020 to 2030
3. Allow annual site production in excess of the permitted 100,000 tons during Federal-, State-, or County-declared emergencies

The EIR 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 EIR 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.

1.4.4 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.

1.5 Resources Not Further Evaluated in this Draft Subsequent EIR

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 Project was not prepared. Effects and issues associated with the Project that were determined to have no impact are discussed below:

- **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 Project site. There are no designated mineral deposits of regional or statewide importance at the Project site.

  The state of California has not designated an area of statewide or regional mineral resource significance within the Project site. The Project site is not delineated in the Lassen County General Plan or Standish-Litchfield Area Plan as a locally important mineral resource. The 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 Project will have no impact to mineral resources

- **Population and Housing:** No new development or infrastructure is proposed as part of the Project and no additional employees are anticipated. In addition, no existing housing or people will be displaced by the Project. The Project does not propose the expansion or relocation of the mining operation. The Project will have no impact to population and housing.

- **Public Services:** The Project includes expansion of an existing mining operation. The Project will not result in population changes that would require new or physically altered schools, parks, or other public facilities. The 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. The Project will have no impact to public services.

- **Utilities and Service Systems:** The 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 Project will utilize the same utilities and services as the current mining operation. The 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 the Hydrology and Water Quality Section of the DSEIR,

the Project will not create a demand for water in excess of available groundwater supplies. The Project will not result in impacts related to utilities and Service Systems.

- **Recreation:** The Project does not include recreational facilities and would have no foreseeable impact on existing recreational facilities; neither will the Project increase the need for recreational services, as no additional employees are proposed. The Project will have no impact to recreation.

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

1.6 Public Scoping and Review Process

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 _____.

The NOP was mailed directly to parties with interest in the Project. The NOP was mailed to the following:

County list here

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.

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 DEIR 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 draft SEIR must be sent to:

Lassen County Department of Planning and Building Services
707 Nevada Street, Suite 5
Susanville, CA 96130
Attn: Nancy McAllister

1.7 Organization of the Draft SEIR

The DSEIR is organized as follows:

Section 1: Introduction. Section 1 describes the intended uses of this EIR, the environmental review approach, documents incorporated by reference, environmental review process, and document organization.

Section 2: Executive Summary. Section 2 includes a summary of the 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.

Section 3: Project Description. Section 3 includes a description of the Project background, Project location, and existing conditions of the Project site. Section 3 also includes the Project objectives, description of the Project characteristics, and approvals and entitlements necessary to implement the Project.

Section 4: Environmental Setting, Impact Analysis, and Mitigation Measures. Section 4 describes the existing environmental setting, impacts and mitigation measures for specific areas identified by the County requiring environmental review.

Section 5: Other CEQA Considerations. Section 5 discusses other CEQA issues, including growth inducing impacts, cumulative impacts, significant and unavoidable impacts on the environment, and significant irreversible environmental changes.

Section 6: Alternatives to the Proposed Project. Section 6 describes alternative to the Project, along with an analysis of the ability of the alternatives to meet the Project objectives and associated environmental impacts.

Section 7: List of Preparers. Section 7 contains a list of report authors and subconsultants.

Section 8: References. Section 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 EIR.

2.0 EXECUTIVE SUMMARY

2.1 Introduction

This Executive Summary section is provided in accordance with CEQA Guidelines §15123. As stated in the State 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." State 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 the Lead Agency 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 project alternatives, environmental impacts and mitigation, areas of known controversy, and issues to be resolved in the DSEIR. Table 2-1 (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.

2.2 Project Objectives

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 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).

The Use Permit and Reclamation Plan Amendment (Project) includes expansion of approximately 51 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 Project applicant has identified the following objectives for the 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

2.3 Summary of Project Description

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

- Expansion of approximately 51 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

2.4 Project Alternatives

Section 15126(d) of the State 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. Section 6 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 96056 and Use Permit Amendment #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.

2.5 Areas of Controversy, Issues Raised, and Areas Resolved in the EIR

Comments received on the Project include those received during early consultation as well as in response to the Notice of Preparation for the Project. The areas of controversy identified include the following:

1. TBD

Comment letters received during early consultation are included in Appendix A of the DSEIR. Comments received on the Notice of Preparation are also included in Appendix A.

2.6 Significant Unavoidable Effects

Potential impacts associated with the following issues were identified by Lassen County as having no impact:

- Mineral Resources
- Population and Housing
- Recreation
- Public Services
- Utilities and Service Systems

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

- Aesthetics
- Agriculture and Forestry Resources
- Energy
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise
- Transportation
- Wildfire

The project could result in potentially significant impacts on the following subject areas:

- Air Quality
- Biological Resources
- Cultural and Tribal Cultural Resources
- Geology and Soils
- Land Use and Planning

Significant and unavoidable impacts, those that cannot be mitigated to a level of less than significant, were identified in the following subject area:

2.6.1 Biological Resources

Expansion of the mining area by an additional 51 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 phonology or the spring green-up due to noise and activity at the site. The 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 #2018-003 limiting mining activities from January 1 to March 31 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 the existing Operating Conditions (Mitigation Measures 4.5-6 and 4.5-7 contained in Section 4.5 of the DSEIR) for the current operation and implementation of the other mitigation measures listed in Section 4.5.6 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.

2.7 Summary of Environmental Impacts and Mitigation Measures

Environmental impacts and mitigation measures are included in Table 2-1.

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
AESTHETIC AND VISUAL RESOURCES			
4.2.5.1 Have a substantial adverse effect on a scenic vista 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 scenic highway. The site does not obstruct, interrupt, or detract from a valued focal point or panoramic vista, trail, or recreation area. There will be no impact to a scenic vista.	No Impact	No mitigation measures are required	No Impact
4.2.5.2 Substantially damage scenic resources including trees, rock outcroppings, and historic buildings within a state scenic highway. The 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. There will be no impacts to scenic resources.	No Impact	No mitigation measures are required	No Impact
4.2.5.3 In non-urbanized areas, substantially degrade the existing visual character or quality of the public views of the site and its surroundings. The Project will alter the visual character of the site by physical disturbance of an additional area. The project area is estimated to be visible from approximately 55,000 acres, which is not a change over baseline. 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. The towns of Litchfield and Standish are shielded from the mine by topographic features. The visual analysis determined that the project would result in impacts to lands to the west of the site. The majority of the parcels affected are large-tract agricultural properties. Less-than-significant impact.	Less than Significant	No mitigation measures are required	Less than Significant
4.2.5.4 Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. The project is permitted to operate for 24-hour periods as needed. Visual impacts were analyzed in the 2019 EIR. This is a baseline condition and will not be modified. No additional sources of lighting are planned or anticipated in the expansion area. The project will not create a substantial new source of light or glare. No project impacts are anticipated.	No Impact	No mitigation measures are required	No Impact

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
AGRICULTURE AND FORESTRY RESOURCES			
4.3.5.1 Conflict with existing zoning for agricultural use or a Williamson Act contract. The site is not covered by a Williamson site contract. Lassen County General Plan allows for mining in areas designated as Extensive Agriculture. There is no impact or conflict with existing uses or a Williamson Act contract.	No Impact	No mitigation measures are required	No Impact
4.3.5.2 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. There is no conflict or impact to forestland.	No Impact	No mitigation measures are required	No Impact
4.3.5.3 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 FMMP Important Farmland Map, no portion of the project site is designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; however, the proposed project site is designated as Grazing Land. The project site does not include any Land Capability Classification (LCC) Class I or II soils (Prime Farmland). The site contains LCC Class 6 and 7 soils, which is not suited to cultivation but could be used as pasture, rangeland, grazing land, forestland, or wildlife habitat. Soils on the project site are identified as either Subclass "e" or "s", indicating the major issues are related to erosion and soil limitations within the rooting zone. Because the soils onsite are of low capability class, the project would have a less-than-significant impact on Prime Farmland, Unique Farmland, and Farmland of Statewide Importance.	Less than Significant	No mitigation measures are required	Less than Significant
Impact 4.3.5.4 Involve other changes in the existing environment that, due to their location or nature, could result in conversion of farmland to nonagricultural use. The project will not result in the loss of prime farmland, unique farmland, or farmland of statewide importance. The project will result in the loss of approximately 51 acres of low capability grazing land. The project will not result in the conversion of farmland to non-agricultural use. As discussed above, the project will not	No Impact	No mitigation measures are required	No Impact

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
result in the loss of prime farmland, unique farmland, or farmland of statewide importance.			
AIR QUALITY			
4.4.5.1 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 Air Pollution Control District. Therefore, Lassen County is not subject to an air quality plan. The Project is subject to the Lassen County Air Pollution Control District rules and regulations. The additional daily emissions of ROG, CO, NOx, PM_{10}, and $PM_{2.5}$ generated by the Project are less than the significance thresholds of the Lassen County APCD. The Air Quality Analysis includes reasonable precautions to prevent particulate matter from becoming airborne consistent with Lassen County Air Pollution Control District Rule 4:18. These precautions are included as Mitigation Measures MM 4.4-1 through 4.4-4. Implementation of these measures will ensure the Project is in compliance with Lassen County APCD rules and regulations.	Significant	**MM 4.4-1 Cover trucks**. Covering open bodied trucks when used for transportation materials likely to give rise to airborne dust. **MM 4.4-2 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. **MM 4.4-3 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. **MM 4.4-4 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.	Less than Significant
4.4.5.2 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 Project will not contribute to a cumulatively considerable air quality impact regarding a pollutant for which the air basin is currently in non-attainment. The Project is not expected to result in a new violation. Cumulative air quality impacts will be less than significant.	Less than Significant	No mitigation measures are required	Less than Significant
4.4.5.3 Expose sensitive receptors to substantial pollutant concentrations. A Health Risk Assessment (HRA) was included in the Air	Less than Significant	No mitigation measures are required	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
Quality Analysis completed by RCH Group for the Project to address health impacts on existing residences and schools from diesel generators and off-road equipment associated with the aggregate extraction 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. The HRA determined 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 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 Project would be less than significant.			
4.4.5.4 Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. . With respect to the proposed Project, diesel-fueled equipment exhaust would generate some odors. However, 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. Given the previous information, odor impacts associated with the location of the Project would be less than significant.	Less than Significant	No mitigation measures are required	Less than Significant
BIOLOGICAL RESOURCES			
4.5.5.1 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). The BRA prepared for the Project identified 13 special-status wildlife species and three special-status plant species as having the potential to occur within the Project area. Potential effects to these species as well as raptors and migratory birds will occur due to direct habitat loss, vegetation removal, human presence, and noise and vibration from the project. Impacts to special-status species, migratory birds, and raptors are potentially significant without mitigation incorporated.	Significant	**MM 4.5-1 Preservation of remaining habitat onsite.** This option would preserve the remaining habitat onsite and involve no additional mining beyond the additional planned 51 acres. Applicant would consent to setting land aside from future development. Most of the surrounding parcels are zoned for development for agricultural or natural resource extraction purposes, so setting undeveloped land aside would ensure undisturbed wildlife habitat.	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
		MM 4.5-2 Partial avoidance. This option would involve locating the proposed Project work in the least environmentally sensitive area in order to avoid disturbance of the rare plant community. Protocol-level surveys will be completed during an appropriate time of year, when the plant is in flowering stage. The area identified as environmentally sensitive would be protected by a buffer zone. **MM 4.5-3 Offsite acquisition of sensitive plant communities.** This option would involve compensating for any loss of sensitive/rare plant communities. This can be achieved through the permanent protection of an offsite native population, permanent protection of an offsite introduced population, or creation and protection of an onsite population. The former is preferred as the success rate of onsite introduction of rare plants is low due to the little knowledge about their specific habitat requirements. **MM 4.5-4 Habitat enhancement.** This option would involve enhancing habitat on the Project parcel or nearby parcels to provide additional cover and foraging opportunities for wildlife species. **MM 4.5-5 Bird nest avoidance.** Vegetation will be removed outside of bird nesting season (February through August), to the extent possible, to avoid impacts to shrub-nesting birds**.** **MM 4.5-6 Limits on operation.** The operator shall continue limits on operations from January 1 to March 31.	

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
		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 1 and March 31 Annually. **MM 4.5-7 Operating conditions of Use Permit #2018-003.** The operator shall continue the Conditions of Approval for Use Permit Amendment #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.	
4.5.5.2 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. **a) Habitat Loss.** The Project includes spatial expansion of the existing mining boundary that would physically disturb and reduce additional 51-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 an browsing by both wildlife and livestock until the plants are well established, as well as monitoring to ensure compliance. Following mining activities, the site will be reclaimed and the habitat will be restored. The seed mix proposed for	Less than Significant	No mitigation measures are required	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
reclamation in the expansion area is similar to the seed mix approved by CDFW for the existing quarry. Reclamation of the mining area following mining activities will restore the sagebrush habitat and provide forage for mule deer and American pronghorn. Impacts related to temporary habitat loss will be less than significant.			
b) Displacement. Expansion of the mining area by an additional 51-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. 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.	Significant	See mitigation measures **MM 4.5-6** through **MM 4.5-7**	Significant and Unavoidable
CULTURAL AND TRIBAL CULTURAL RESOURCES			
The Project would cause a substantial adverse change in the significance of a historical or archaeological resource pursuant to § 15064.5. 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 to the adverse change in the significance of currently undiscovered cultural or archaeological resources, resulting in a significant impact.	Significant	**MM 4.6-1 Avoidance of cultural resources.** Project proponents should avoid altering potentially eligible cultural resources. Under CEQA, cultural resources that will be affected by an undertaking must be evaluated to determine their eligibility for listing in the CRHR (PRC Section 5024.1(c)). If resources cannot be avoided by the project then they should be formally evaluated to determine their eligibility for listing on the CRHR. The process for considering cultural resources on CEQA projects is essentially linear, although in practice it may overlap or be compressed. Evaluating prehistoric properties involves four basic tasks: (1) development of an archaeological research design (2) field excavations, (3) laboratory analysis, and (4) report preparation and eligibility determination.	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
		MM 4.6-2 Unanticipated discovery of cultural resources. If previously unidentified cultural resources are encountered during project implementation, avoid altering the materials and their stratigraphic context. A qualified professional archaeologist should be contacted to evaluate the situation. Project personnel should not collect cultural resources. Prehistoric resources include, but are not limited to, chert or obsidian flakes, projectile points, mortars, pestles, and dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials. Historic resources include stone or abode foundations or walls; structures and remains with square nails; and refuse deposits or bottle dumps, often located in old wells or privies.	
4.6.5.2 The Project would disturb human remains, including those interred outside of formal cemeteries. No human remains are known to existing within the project site. However it is possible human remains could be encountered over the course of the project. Impacts related to the disturbance of human remains are potentially significant.	Significant	**MM 4.6-3 Unanticipated discovery of human remains.** Although unlikely, if human remains are encountered, all work must stop in the immediate vicinity of the discovered remains and the County Coroner and a qualified archaeologist must be notified immediately so that an evaluation can be performed. If the remains are deemed to be Native American and prehistoric, the Native American Heritage Commission must be contacted by the Coroner so that a "Most Likely Descendant" can be designated and further recommendations regarding treatment of the remains is provided.	Less than Significant
4.6.5.3 The Project would Cause a substantial adverse change in the significance of a tribal cultural resource. As discussed under impact	Significant	See mitigation measures **MM 4.6-1** and **MM 4.6-2.**	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
4.6.5.1, the cultural resource identified within the expansion area (ALTA_PRE-01) is potentially eligible for the CRHR. 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.			
ENERGY			
4.7.5.1 Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. The Project will increase the annual energy requirements for mining operations and extend the energy needs of the Project for an additional 20 years. The increase in energy will be proportionate to the increased volume of material produced from the mine. Following reclamation of the site after mining ends in 2050, the Project will no longer require fuel or electricity. The electricity and fuel demands of the Project will not exceed local or regional supplies during the operational period of the Project. The Project does not include an increase in traffic generated by the operation. Transportation alternatives are not available for material haul trucks. The Project will supply construction projects requiring materials that would occur with or without the Project. The facility tends to shorten trips and reduce vehicle miles traveled and fuel use by providing a construction material source in the region serving local projects. Therefore, the Project results in an overall decrease in energy use to transport materials to local construction projects. Hat Creek Construction & Materials, Inc., will be making improvements to the mixes of asphalt to be more energy and resource efficient, such as using RAP in mixes. This Project does recycle concrete and asphalt and uses the recycled materials in with the new asphalt materials. The energy use of the Project will not be considered inefficient, wasteful, or unnecessary. This impact will be less than significant.	Less than Significant	No mitigation measures are required	Less than Significant
4.7.5.2 Conflict or obstruct a state or local plan for renewable energy or energy standards. This Project will not conflict or obstruct a state and local plan for renewable energy resources or energy standards. No impact.	No Impact	No mitigation measures are required	No impact
GEOLOGY AND SOILS			
Impact 4.8.5.1 Expose people or structures to potential substantial	Less than Significant	No mitigation measures are required	Less than

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
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?** The Geotechnical Report prepared for the project states that there could be a risk of fault rupture across the project site from the warm Valley Springs fault. 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 expansion area will be conducted in accordance with the recommendations included in the Geotechnical Report. This impact will be less than significant.			Significant
ii) Strong seismic ground shaking? The quarry is 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.	Less than Significant	No mitigation measures are required.	Less than Significant
iii) Seismic-related ground failure, including liquefaction? 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 exploratory on site. Terrace deposits are considered to have a low potential for liquefaction susceptibility and the impacts would be less than significant.	Less than Significant	No mitigation measures are required.	Less than Significant
iv) Landslides? Mining at the project site will be conducted per the	Less than Significant	No mitigation measures are required.	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
recommendations included in the Geotechnical Report, which will minimize the risk of landslides on cut faces. Landslide risk at the project site will be less than significant**.**			
Impact 4.8.5.2 Result in substantial soil erosion or the loss of topsoil? The 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 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.	Less than Significant	No mitigation measures are required.	Less than Significant
4.8.5.3 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? 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 C of the Geotechnical Report). Thus, terrace deposits are considered to have a low potential for liquefaction susceptibility or lateral spreading and a less than significant impact.	Less than Significant	No mitigation measures are required.	Less than Significant
4.8.5.4 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 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. **4.8.5.5 Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?** The proposed expansion does not include the use of any septic tanks or alternative waste water disposal systems. There would be no impact related to adequately supporting these systems.	No Impact	No mitigation measures are required.	No Impact
4.8.5.6 Directly or indirectly destroy a unique paleontological	Significant	**MM 4.8-1 Avoid and Minimize**	Less than

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
resource or site or unique geologic feature? . There are no known paleontological resources or unique geologic features present in the proposed expansion area. However, there is a chance that currently unknown paleontological resources may exist below the ground surface and could be encountered during mining and reclamation activities at the project site. The project would result in a significant impact if paleontological resources are directly or indirectly destroyed during activities at the project site.		**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 project proponent shall be required to implement mitigation necessary for the protection of paleontological resources. The County and Hat Creek Construction shall consider the mitigation recommendations of the qualified paleontologist for unanticipated discoveries. The County and Hat Creek Construction shall consult and agree upon implementation of a measure or measures that the County and Hat Creek Construction deem feasible and appropriate. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures	Significant
GREENHOUSE GAS EMISSIONS			
4.9.5.1 Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. The Air Quality Analysis prepared by RCH Group included estimates of the existing condition and the proposed Project's estimated operational GHG emissions. The estimated annual incremental GHG emissions of the Project would be approximately 61 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.	Less than Significant	No mitigation measures are required.	Less than Significant
4.9.5.2 Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Neither Lassen County Air Pollution Control District nor Lassen	Less than Significant	No mitigation measures are required.	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
County has a currently adopted region-specific plan for reducing GHG emissions. As discussed under Impact 4.9.5.1 above, GHG emissions generated by the 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 Project would not conflict with any applicable plans, polices, or regulations adopted for the purpose of reducing the emissions of greenhouse gases. This impact would be less than significant.			
4.10.5.1 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. Activities that will occur in the expansion area include material extraction and use of a portable crusher. Blasting will also occur. The 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 Environmental Health 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. Impacts will be less than significant.	Less than Significant	No mitigation measures are required.	Less than Significant
4.10.5.2 Expose people or structures to a significant risk of loss, injury or death involving wildland fires. 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	Less than Significant	No mitigation measures are required.	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
implemented at the current operation and will be required in the expansion area as well. The Project will not expose people or structures to a significant risk or loss, injury or death involving wildland fires. This impact will be less than significant.			
HYDROLOGY AND WATER QUALITY			
4.11.5.1 Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. 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 Spill Prevention, Control, and Countermeasure (SPCC) Plan in double-walled containers The current mining operation at the Project site retains all surface flow (stormwater) onsite. Stormwater from the expansion area will be conveyed to the existing retention ponds at the Project site 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 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 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 be secured and Spill Prevention and Countermeasure Plan for fuel storage be approved by the RWQCB. Project impacts to surface and groundwater quality will be less than significant.	Less than Significant	No mitigation measures are required.	Less than Significant
4.11.5.2 Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. The Project could increase the groundwater use for dust suppression at the Project site since the acreage of the mining area will increase by 51 acres. In addition, the operation of off-road equipment will increase to support the increase in annual production. A maximum water use increase of 50	Less than Significant	No mitigation measures are required.	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
percent for dust suppression could occur (increase from 38 acre-feet per year to 57 acre-feet per year) The Project 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. The Project will not substantially decrease groundwater supplies or interfere substantially with groundwater recharge. Impacts to groundwater supplies will be less than significant.			
4.11.5.3 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;** 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. Less-than-significant impact.	Less than Significant	No mitigation measures are required.	Less than Significant
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or offsite; See response to i) above. Stormwater 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. The Project will not result in flooding on-or-offsite. This impact will be less than	Less than Significant	No mitigation measures are required.	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
significant.			
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; The expansion area is 51 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. Less-than-significant impact.	Less than Significant	No mitigation measures are required.	Less than Significant
iv) impede or redirect flood flows There are no rivers or streams within the Project site. The Project is not located within a floodplain. The Project will not impede or redirect flood flows. No impact.	No Impact	No mitigation measures are required	No Impact
4.11.5.4 Result in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation. The Project site is not located within a flood hazard zone, tsunami, or seiche zone. The Project site will not be inundated by water from flooding, tsunami or seiche. There is no risk of release of pollutants due to Project inundation. No impact	No Impact	No mitigation measures are required	No Impact
4.11.5.5 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 Groundwater Management Plan 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 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 Project will not conflict with or obstruct the Water Quality Control Plan for the Lahontan Region. This impact will be less than significant.	Less than Significant	No mitigation measures are required.	Less than Significant
LAND USE AND PLANNING			
4.12.5.1 Conflict with Lassen County General Plan or Standish-Litchfield Area Plan. The proposed expansion area is currently zoned Upland Conservation District/Agricultural Preserve Combining District.	Significant	**MM 4.12-1 Preservation of remaining habitat onsite.** This option would preserve the remaining habitat onsite	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
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 Project includes an Amendment to the Use Permit to include the 51-acre expansion area, increase in processing volume, and extension of the life of the mine. The 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 the Biological Resources section 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 Project will result in impacts to wildlife habitat. The impacts of the Project to pronghorn and mule deer and special-status species are discussed in the Biological Resources section of the DSEIR. This impact will be significant without mitigation. With implementation of the Biological Resource Mitigation Measures, the Project will not conflict with Goal L-22 of the Lassen County General Plan Land Use Element.		and involve no additional mining beyond the additional planned 51 acres. Applicant would consent to setting land aside from future development. Most of the surrounding parcels are zoned for development for agricultural or natural resource extraction purposes, so setting undeveloped land aside would ensure undisturbed wildlife habitat. **MM 4.12-2 Partial avoidance.** This option would involve locating the proposed Project work in the least environmentally sensitive area in order to avoid disturbance of the rare plant community. Protocol-level surveys will be completed during an appropriate time of year, when the plant is in flowering stage. The area identified as environmentally sensitive would be protected by a buffer zone. **MM 4.12-3 Offsite acquisition of sensitive plant communities.** This option would involve compensating for any loss of sensitive/rare plant communities. This can be achieved through the permanent protection of an offsite native population, permanent protection of an offsite introduced population, or creation and protection of an onsite population. The former is preferred as the success rate of onsite introduction of rare plants is low due to the little knowledge about their specific habitat requirements. **MM 4.12-4 Habitat enhancement.** This option would involve enhancing habitat on the Project parcel or nearby parcels to provide additional cover and foraging	

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
		opportunities for wildlife species. **MM 4.12-5 Bird nest avoidance.** Vegetation will be removed outside of bird nesting season (February through August), to the extent possible, to avoid impacts to shrub-nesting birds. **MM 4.12-6 Limits on operation.** The operator shall continue limits on operations from January 1 to March 31. 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 1 and March 31 Annually. **MM 4.12.-7 Operating conditions of Use Permit #2018-003.** The operator shall continue the Conditions of Approval for Use Permit Amendment #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.	
NOISE			
4.13.5.1 Result in substantial temporary or permanent increase in ambient noise levels in excess of standards established in the Lassen County General Plan **a) Plant Operations** The Project does not include changes to plant operational noise levels analyzed in the 2019 EIR. As discussed in the 2019 EIR, the nighttime noise levels of plant operations could exceed the Lassen County nighttime	Less than Significant	No mitigation measures are required.	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
noise level criteria of 40 dBA L50, if generator start-up operations occur during the nighttime hours of 10:00 p.m. to 7:00 a.m., resulting in a potentially significant impact. A mitigation measure restricting generator start-up operations to between the hours of 7:00 a.m. to 10:00 p.m. was included in the 2019 EIR to reduce plant operation noise levels to a less than significant level and was required as Condition of Approval #4 for the Use Permit Amendment. This condition of approval will be implemented for the Project. Once operations occur, they are generally in the mid 30 dBA L50 range, meeting the County nighttime criteria of 40 dBA. In addition, some of the plant equipment at the Project site has been switched to electric power instead of using a generator. Plant operation noise levels of the proposed Project will not exceed standards established in the Lassen County General Plan. This impact will be less than significant.			
b) Expansion Area 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). 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 and will not exceed the L50, L25, L8 or L1.5 daytime noise standards for Lassen County at the nearest residence 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 #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. This location would be further from the residences than the location of the crusher currently onsite resulting in lower noise levels at the closest residences than noise produced by the crushing operations of the current operation. Condition of Approval #4 restricting generator start-up operations to between the hours of 7:00 a.m. to 10:00 p.m. was determined to reduce noise levels from the current plant area including crushing operations to below Lassen County noise standards. This condition of approval will apply to the proposed Project as well.	Less than Significant	No mitigation measures are required.	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
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.			
c) Materials Haul Truck Operations The 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, not by increasing truck volumes. The Project will continue to comply with Condition of Approval #8 of Use Permit Amendment #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). 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. The Project will not result in a significant increase in existing traffic noise levels. Noise levels up to 65 dB are conditionally acceptable and allowed by Use Permit Amendment #2018-003. The Project will have a less-than-significant impact related to traffic noise level increases.	Less than Significant	No mitigation measures are required.	Less than Significant
4.13.5.2 Result in the generation of excessive groundborne vibration or groundborne 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 residences than equipment operated in the current mining area and will result in lower levels of vibration at the closest residence or structure compared to existing operations.. The operator will continue to comply with Condition of Approval #3 stating no grading, blasting, or excavating shall be allowed between the hours of 6:00 p.m. and 7:00 a.m. year-round. The Project will not result in an increase in truck traffic or associated levels of vibration. Project impacts related to groundborne vibration and ground born noise levels will be less than significant.	Less than Significant	No mitigation measures are required.	Less than Significant
TRANSPORTATION AND TRAFFIC			
4.14.5.1 Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). The Project 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 Project VMT are created by construction	Less than Significant	No mitigation measures are required.	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
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 Project are located near Lake Almanor or north of Reno in Nevada. Therefore, the Project results in an overall decrease in VMT for construction projects within Lassen County. The Project will not result in an increase in VMT and will not conflict with or be inconsistent with CEQA Guidelines section 15064.3. This impact will be less than significant.			
WILDFIRE			
4.15.5.1 The Project could substantially Impair an Adopted Emergency Response Plan or Emergency Evacuation Plan. The Project site 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 Project does not include an increase in peak traffic volumes generated by the existing operation. The Project will not interfere with the implementation of or physically interfere with an adopted emergency response or evacuation plan. This impact is less than significant.	Less than Significant	No mitigation measures are required.	Less than Significant
4.15.5.2 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. 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. The Project will result in a less than significant impact related to the exposure of Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.	Less than Significant	No mitigation measures are required.	Less than Significant
4.15.5.3 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	Less than Significant	No mitigation measures are required.	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
Environment The Project will not require installation of fire breaks or additional water sources, power lines, or other utilities. The Project 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. Impacts of the internal roads are included in the analysis of the Project. The Project does not include construction of any infrastructure that may exacerbate fire risk or result in temporary or ongoing impacts to the environment. This impact is considered less than significant.			
Impact 4.15.5.4 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. The Project does not include development of housing or additional structures; however, the Project site will be occupied by employees. 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. The Project will not expose people or structures to significant risks. This impact is considered less-than significant.	Less than Significant	No mitigation measures are required.	Less than Significant
CUMULATIVE IMPACTS			
Cumulative Aesthetics and Visual Resources			
Have a cumulative substantial adverse effect on a scenic vista As discussed in the Aesthetics and Visual Resources Section of the DSEIR, 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. The Project will have no impact to a scenic vista. Therefore, the Project will not contribute to a cumulative impact to a scenic vista.	No Impact	No mitigation measures are required	No Impact
Substantially damage scenic resources including trees, rock outcroppings, and historic buildings within a state scenic highway. The Project is not located in an area that is designated as scenic highway. The Project is visible from portions of Highway 395 for a distance of approximately 2 miles; however, 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. The Project will not result in impacts	No Impact	No mitigation measures are required	No Impact

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
to scenic resources within a state scenic highway; therefore, the impacts of the 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 Project 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. The Project will result in a less than significant cumulative impact to the existing character and quality of the site and surroundings.	Less than Significant	No mitigation measures are required	Less than Significant
Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. The Project will not create a substantial new source of light or glare. The Project 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.	No Impact	No mitigation measures are required	No Impact
Cumulative Agriculture and Forestry Resources Impacts			
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. There is no impact or conflict with existing uses or a Williamson Act contract, therefore the impacts of the Project are not cumulatively considerable. The Project will not contribute to a cumulative impact related to the conflict with existing zoning for agricultural use or a Williamson Act contract.	No Impact	No mitigation measures are required	No Impact
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,	No Impact	No mitigation measures are required	No Impact

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
or timber production zone. The Project does not impact forestland. The 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. According to the FMMP Important Farmland Map, no portion of the Project site is designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. The Project will not impact Farmland. The Project will not contribute to a cumulative impact related to conversion of Farmland.	No Impact	No mitigation measures are required	No Impact
Involve other changes in the existing environment that, due to their location or nature, could result in conversion of farmland to nonagricultural use. The Project will result in the loss of approximately 51 acres of low capability grazing land during the duration of the Project. 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 this General Plan. Once mining is complete, the expansion area and current mining area will be reclaimed in accordance with the Reclamation Plan to open space and wildlife habitat and will be available for use as grazing. The contribution of the Project to a cumulative impact will be less than significant.	Less than Significant	No mitigation measures are required	Less than Significant
Cumulative Air Quality Impacts			
Conflict with or obstruct implementation of the applicable air quality plan. Lassen County is not subject to an air quality plan. The Project is subject to the Lassen County Air Pollution Control District rules and regulations. The daily and annual emissions generated by the Project are below the Lassen County APCD emission thresholds for ROG, NOx, PM_{10}, $PM_{2.5}$ and CO for new sources or modification of an existing source. These thresholds are project specific. As required by the mitigation	Significant	See Mitigation Measures **MM 4.4-1** through **MM 4.4-4**	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
measures in the Air Quality Section, reasonable precautions will be taken to prevent particulate matter from becoming airborne. The Project will not contribute to a cumulative impact related to an air quality plan. The cumulative impact of the Project related to compliance with Lassen County APCD rules and regulations will be less than significant with mitigation incorporated.			
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 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 Project are included in the Air Quality Section of this DSEIR. Cumulative air quality impacts of the Project related to criteria pollutants will be less than significant.	Less than Significant	No mitigation measures are required.	Less than Significant
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. The adjacent mine does not have any generators, therefore cumulative impacts related to toxic air contaminants are anticipated to be less than significant.	Less than Significant	No mitigation measures are required.	Less than Significant
Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. Diesel-fueled equipment exhaust would generate some odors. These odors have the potential to result in cumulative odor impacts in combination with additional nearby sources of diesel fueled equipment exhaust. 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	Less than Significant	No mitigation measures are required.	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
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 Project does not include an increase in haul truck traffic. As discussed under Impact 4.4.5.4, odor emissions are highly dispersive, especially in areas with higher average wind speeds. The cumulative odor impacts of the Project will be less than significant.			
Cumulative Biological Resources Impacts			
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 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. Cumulative impacts of the Project to special-status species will be less than significant with implementation of the mitigation measures contained in the Biological Resources section (4.5.6) of the DSEIR.	Significant	See mitigation measures **MM 4.5-1** through **MM 4.5-7**	Less than Significant
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. **a) Habitat Loss.** The temporary loss of 51 acres of habitat was	Less than Significant	No mitigation measures are required.	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
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 pit 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 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.			
b) Displacement. 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 cumulative impact related to the displacement of mule deer and antelope from winter habitat.	Significant	See mitigation measures **MM 4.5-6** through **MM 4.5-7**	Significant and Unavoidable
Cumulative Cultural Resources and Tribal Cultural Resources Impacts			
The Project would cause a substantial adverse change in the significance of a historical or archaeological resource pursuant to § 15064.5. The 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 significant of currently undiscovered cultural or archeological resources at the Project site. Mitigation measures for impacts to Cultural Resource contained in section 4.6.6 of the DSEIR 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	Significant	See Mitigation Measure **MM 4.6-1** and **MM 4.6-2**	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
of mitigation measures for the Project, cumulative impacts of the Project to historical or archeological resources would be 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 the Project. Mitigation Measure 4.6-3 is included for the Project to ensure that impacts related to the disturbance of human remains would be less than significant. This mitigation measure would ensure the Project's contribution to a cumulative impact would be less than significant.	Significant	See Mitigation Measure **MM 4.6-3**	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 Cultural and Tribal Cultural Resources section of the DSEIR 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 mitigation incorporated, impacts of the Project in combination with impacts from past, present, or reasonably foreseeable projects will result in a less-than-significant cumulative impact on tribal cultural resources.	Significant	See Mitigation Measure **MM 4.6-1** and **MM 4.6-2**	Less than Significant
Cumulative Energy Impacts			
Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. The Energy Consumption impacts of the Project are less than significant. The Project will not combine with other projects to create a significant impact on local and regional energy supplies resulting in a need of additional capacity. The Project will not combine with other projects to result in an increase on peak	Less than Significant	No mitigation measures are required.	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
and base period demand for electricity and other forms of energy or result in a significant impact on energy resources. Cumulative impacts of the Project related to Energy Consumption will be less than significant.			
Conflict or obstruct a state or local plan for renewable energy or energy standards. The Project will not conflict or obstruct a state or local plan for renewable energy resources or energy standards. The Project will not contribute to a cumulative impact related to conflict with a state or local plan for renewable energy or energy standards.	No Impact	No mitigation measures are required.	No Impact
Cumulative Geology and Soils Impacts			
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 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 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.	Less than Significant	No mitigation measures are required.	Less than Significant
Result in substantial soil erosion or the loss of topsoil? The proposed 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 Project will not contribute to a cumulative soil erosion or loss of topsoil impact.	Less than Significant	No mitigation measures are required.	Less than Significant
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	Less than Significant	No mitigation measures are required.	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
collapse? The volcanic rock materials at the 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. Project-level impacts are less than significant. The Project is cumulatively considerable when combined with mining within the current mining boundary of the operation. The materials of the current mining operation adjacent to the proposed expansion area is similar to that of the expansion area. The cumulative impact of the Project is less than significant.			
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 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 Project are not cumulatively considerable.	No Impact	No mitigation measures are required..	No Impact
Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water The proposed expansion does not include the use of any septic tanks or alternative waste water disposal systems. This impact of the Project is not cumulatively considerable.	No Impact	No mitigation measures are required.	No Impact
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 the Geology and Soils section of the DSEIR 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 Project with the incorporation of mitigation measures contained in in the DSEIR would reduce the potential cumulative impact of the Project to a less-than-significant level	Significant	See Mitigation Measure **MM 4.8-1**	Less than Significant
Cumulative Greenhouse Gas Emissions			
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 Project would be approximately 61 metric tons of CO2e, which is well below the significance threshold of	Less than Significant	No mitigation measures are required.	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
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 Project 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. GHG emissions generated by the 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 Project would not conflict with any applicable plans, polices, or regulations adopted for the purpose of reducing the emissions of greenhouse gases. This impact would be less than significant. The 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.	Less than Significant	No mitigation measures are required.	Less than Significant
Cumulative Hazards and 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 Project to result in a cumulative impact related to hazardous materials.	Less than Significant	No mitigation measures are required..	Less than Significant
Expose people or structures to a significant cumulative risk of loss, injury or death involving wildland fires. The Project will not expose people or structures to a significant risk or loss, injury or death involving wildland fires. The Project risk of wildfire is cumulatively considerable in combination with potential fire sources in the Project vicinity including the	Less than Significant	No mitigation measures are required..	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
neighboring BLM mine, and neighboring agricultural and residential activities. With Fire Prevention and Control standards, the Project will result in a less-than-significant contribution to a cumulative wildland fire impact.			
Cumulative Hydrology and Water Quality Impacts			
Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Water discharged from the gravel/aggregate washing operations onsite are retained in settling ponds. The 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 be secured and Spill Prevention and Countermeasure Plan for fuel storage be approved by the RWQCB. With these measures in place, the Project will result in a less-than-significant contribution to groundwater quality impacts.	Less than Significant	No mitigation measures are required.	Less than significant
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. Groundwater impact of the Project may have a cumulative impact when considered with all current and future projects within the same groundwater basin that may utilize groundwater. 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. Cumulative impacts to groundwater supplies will be less than significant.	Less than Significant	No mitigation measures are required.	Less than Significant
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	Less than Significant	No mitigation measures are required.	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
impacts related to alteration of the existing drainage pattern of the site were determined to be less than significant. All stormwater from the Project will be retained onsite. There are no surface waters onsite and the Project will not alter the course of a stream or river. The expansion area is 51 acres and will not 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. Ponds will be 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 Project are confined to the Project site and are not cumulatively considerable.			
In flood hazard, tsunami, or seiche zones, risk release of pollutants due to inundation. The Project site is not in an area subject to inundation by seiche, tsunami, or mud flow. There is no 100-year flood hazard area onsite. The Project was determined to have no impact. The Project will not contribute to a cumulative impact related to the release of pollutants due to inundation from flood, tsunami, or seiche.	No impact	No mitigation measures are required.	No Impact
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. The Project will result in less than significant cumulative impacts related to conflict or obstruction of a water quality control plan or sustainable groundwater management plan.	Less than Significant	No mitigation measures are required.	Less than Significant
Cumulative Land Use Impacts			
Conflict with Lassen County General Plan or Standish-Litchfield Area Plan. 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 Project 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 Project will not contribute to significant cumulative impact related to conflict with Lassen County General Plan or Standish-Litchfield Area Plan.	Less than Significant	No mitigation measures are required.	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
Cumulative Noise Impacts			
Result in substantial temporary or permanent increase in ambient noise levels in excess of standards established in the Lassen County General Plan. 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. 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. Noise from material haul truck operations is cumulatively considerable in combination with any future traffic increases through the year 2050. Traffic from the 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 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 Project is not anticipated to combine with future projects or traffic from population growth in the county to result in a significant cumulative impact.	Less than Significant	No mitigation measures are required.	Less than Significant
Result in the exposure or persons to or generation of excessive ground borne vibration or ground borne noise levels. Vibration and groundborne noise from the Project are cumulatively considerable in combination with other sources adjacent to the Project site. There are no	Less than Significant	No mitigation measures are required.	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
projects within the area that will include stationary sources of vibration or ground borne noise levels. 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. The Project will not result in a significant cumulative impact related to groundborne vibration and groundborne noise levels.			
Cumulative Transportation and Traffic Impacts			
Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). 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 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 Project will likewise result in a less-than-significant cumulative impact related to VMT.	Less than Significant	No mitigation measures are required.	Less than Significant
Cumulative Wildfire Impacts			
The Project Could Substantially Impair An Adopted Emergency Response Plan Or Emergency Evacuation Plan. The 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.	Less than Significant	No mitigation measures are required.	Less than Significant
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. Project-level impacts related to the exposure of Project occupants 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	Less than Significant	No mitigation measures are required.	Less than Significant

Table 2-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
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 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.	Less than Significant	No mitigation measures are required.	Less than Significant
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. The Project will not expose people or structures to significant risks. Project-level impacts were determined to be less than significant. This impact is Project-site specific and not-cumulatively considerable.	Less than Significant	No mitigation measures are required.	Less than Significant

3.0 PROJECT DESCRIPTION

This section describes the location and the existing conditions of the Project site, as well as the Project characteristics.

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. The quarry is located in Section 32, Township 30 North, Range 14 East, MDBM. The latitude and longitude at the center of the Project are 40° 24' 52.12' and -120° 25' 2.07', respectively. In decimal degrees, the latitude and longitude at the center of the Project are 40.414478° and -120.417222°, respectively.

The general site location of the Project is shown on Figure 3-1. The Use Permit Amendment and Reclamation Plan Amendment (Project) address changes to the current operation within portions of APN 109-100-59 (historically, APN 109-100-40) and APN 109-100-60 (historically, APN 109-100-42). TNT Enterprises also owns APN 109-100-29, but nothing will take place on that parcel.

The Project site includes the existing mining boundary as well as the proposed 51-acre expansion area located to the north of the existing mining boundary. The total parcel size of APN 109-100-59 is 442 acres and the total parcel size of APN 109-100-60 is 240 acres. Parcel boundaries are shown on Figure 3-2.

The currently disturbed area under Use Permit 2018-003 is approximately 138 acres. The Reclamation Plan Amendment adds an expansion of approximately 51 acres. The new total area of the mine is approximately 189 acres. Approximately 13 acres will begin reclamation in 2021. 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 #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 – 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.

The amendments to the use permit covered in the 1997 EIR included:

1. 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).
2. Onsite production of ready-mix concrete added to the use permit as an allowed use.
3. 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.
4. Expansion of the season of operation from seven months (April through October) to year-round as weather permits.

The Reclamation Plan was already 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.

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 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 proposed Use Permit Amendment included:

1. 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;
2. Extending the life of the quarry from 2020 to 2030; and
3. Increasing the annual volume to be mined per year to over 100,000 tons if responding to emergency situations.

A Subsequent Environmental Impact Report was completed at the request of Lassen County. Use Permit Amendment No. 2018-003 was 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 2018-001. No other portion of the Reclamation Plan was amended at that time.

3.3 Project Objectives

The proposed Use Permit and Reclamation Plan Amendment (Project) includes the following changes to the previously permitted operations:

1. Expansion of approximately 51 acres, with an associated additional volume of 5,000,000 tons of material
2. Extension of life of the mine from 2030 to 2050
3. Increase of maximum volume per year from 100,000 tons to 200,000 tons per year

With these amendments, the facility will continue to provide local construction materials in Lassen County. The Project applicant has identified the following objectives for the 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

3.4 Current Physical Setting

3.4.1 Topography

The 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. Current DEM topography of the Project site is shown on Figure 3-4.

3.4.2 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 375 feet west of the Project site and Ward Lake is located 0.5 miles west of the Project site. Willow Creek is located approximately 1 mile west of the site and the Susan River is approximately 2 miles south of the site. Hydrology is shown on Figure 3-5.

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 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, California *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.

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.

Well water 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.

3.4.3 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). A more detailed geologic description is included in the Geotechnical Report prepared by BAJADA Geosciences, Inc., in October 2020 included as Appendix B. Surface geology is shown 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 project north through the quarry area and region 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. Soils are shown on Figure 3-7. Soil report is included in Appendix C.

3.4.4 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 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 (CNDDB), 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*)

3.4.5 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 51-acre expansion area in September 2020. One cultural resource and two isolated finds were identified within the proposed expansion area.

3.4.6 Land Use

The site is surrounded by open grazing lands, generally zoned Upland Conservation and designated in the Standish-Litchfield Area Plan as Extensive Agriculture. Immediate 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.

The two 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 shown on Figures 3-8 and 3-9, respectively.

Land use adjacent to the current operation boundaries are defined by the Lassen County General Plan Land Use as "Agricultural Residential" to the west, "Extensive Agriculture" to the north, and "Open Space" to the south and the east. Zoning adjacent to the current operations is "Open Space District" to the south and east, "Upland Conservation /Agricultural Preserve Combining District" to the north, and "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 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 "Upland Conservation District" to the west and "Open Space" to the south, east, and north.

There are twelve residences located within one mile of the 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 4,600 feet to the south. Nearby residences are shown on Figure 3-10 and adjacent property ownership is shown on Figure 3-11.

The site is located four miles east of the California State Correctional Center. 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.

3.5 Existing Baseline Operations

The mining operation currently operates under Lassen County Use Permit No. 2018-003/ Reclamation Plan 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 1 and March 31, 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 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.

3.5.1 Existing Hours of Operation

The current use permit allows for six-day-per-week, 24-hour operations, with the exception of January 1 to March 31 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.

3.5.2 Existing Mining Area

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

3.5.3 Existing Site Life

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

3.5.4 Existing Volume Removal

The Ward Lake Pit 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.

3.5.5 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 #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.

3.5.6 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 used during nighttime hours.

3.5.7 Resolution 97-067 Operating Conditions

On September 23, 1997, Board of Supervisors Resolution 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 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 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 1 and March 31 annually.

22. Hours of operation, including truck traffic to and from the site on Ward Lake Road shall be limited to 6:00 am. 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 ¼ of the SE ¼ of the NE ¼;
E ½ of the NE ¼ of the SE ¼
NE ¼ of the SE ¼ of the SE ¼
Section 33: SW ¼ of the NW ¼:
W ½ of the SW ¼

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.

3.5.8 Current Resolution 2018-003 Operating Condition

Conditions of approval pursuant to Use Permit Amendment #2018-003 follow:

9. All requirements and conditions of the previously approved Use Permit #96056 and Reclamation Plan #94032 remain applicable, excepting the changes addressed in Use Permit Amendment #2018-003 and Reclamation Plan Amendment #2018-001.
10. No nighttime operations (7:00 p.m. to 6:00 a.m.) shall be conducted during the period of January 31 through March 31 of each year.
11. No grading, blasting, or excavating shall be allowed onsite between the hours of 6 p.m. and 7:00 a.m., year-round.
12. Start-up of onsite generators shall be restricted to between the hours of 7 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 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.

3.6 Proposed Project Amendments

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

- Expansion of approximately 51 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

3.6.1 Proposed The Project does not include changes to the existing hours of operation.

3.6.2 Proposed Mining Area

The Project would allow the expansion of the site to 51 acres north of current operations. Processing site conditions will not change. Quarrying will continue as current operations into the expansion area. Portions of the current quarry area will be reclaimed. The expansion area was shown on Figure 3-2.

3.6.3 Proposed Site Life

The site life will be extended by 20 years to 2050.

3.6.4 Proposed Volume Removal

The Ward Lake Pit is permitted to remove 100,000 tons of material per year. The actual amount removed varies by year and product demand. The Project will allow annual extraction volume to be 200,000 tons.

3.6.5 Proposed Equipment and Truck Volume

The 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 project includes an increase in crushing operations from 100,000 tons per year to 200,000 tons per year. The 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 Project will not change the hot mix asphalt plant, the lime slurry mix plant, the concrete plant or portable plant production or operations.

The Project will not result in an increase in average or maximum daily truck volumes generated by the existing project. 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 under the Project are not anticipated to change. Project truck volumes will not exceed the maximum allowed truck volume of 275 round-trip truck trips per day (275 arriving, 275 departing) that occurs under existing operations. Truck distribution will not change from existing operations.

3.7 Required Approvals

The following permits will be required to implement the Project:

- Conditional Use Permit, Lassen County Planning Commission and Board of Supervisors for the proposed operational changes
- Reclamation Plan, 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

This section contains discussions of the environmental setting, impacts, and mitigation measures for specific areas identified by the County that require additional review. Based on the documentation presented previously in Section 1, this section will focus ONLY on the issue areas identified as having significant and potentially significant impacts in the Initial Study or identified by the County. The issues are organized to discuss the following:

- **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 two 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 based on the Environmental Checklist in Appendix G of the State CEQA Guidelines (Sections 15000 to 15387) and other resource-specific sources as described in each subsection. The thresholds and criteria derived from the checklist have been modified as appropriate to meet the circumstances of the alternatives.
- **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)(l)).
- **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 State 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.

The section is organized as follows:

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

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 Section 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* (Visual Analysis), prepared for the Project by VESTRA in November 2020. The Visual Analysis is included as Appendix E and addresses the impacts to the general area and adjacent residences due to nighttime lighting.

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 4300 feet above mean sea level. 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 4280 feet. Another ridge at elevation 4360 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 State Correctional Center. 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 U.S. Highway 395 in the center of town.

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 California Correctional Center, located approximately 4 miles west of the Project site. The California Correctional Center 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.

4.2.2 Regulatory Setting

The following is a description of Federal, State, and local environmental laws and policies that are relevant to the California Environmental Quality Act (CEQA) review process.

4.2.2.1 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.

4.2.2.2 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.

4.2.2.3 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 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 Review

4.2.3.1 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 and 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.*

4.2.3.2 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.*

4.2.3.3 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 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.*

Current Operations
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.

4.2.4 Thresholds of Significance

Thresholds of significance that could occur were determined using 2021 CEQA Guidelines. These guidelines provide guidance in defining significant aesthetic impacts. Based on this guidance, a project may be deemed to have a significant impact on aesthetics if it will:

- Have a substantial adverse effect on a scenic visa
- 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 Impact Analysis

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 51 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 this 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 of 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). The resulting projected data is shown 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 and on previous figures. This is not anticipated to increase.

Table 4-1
VIEWSHED STATISTICS

Observation Location	Linear Feet of Highway 395 within Five Miles of Project Area
North Observation Point	10,702
South Observation Point	5,974

In summary, the proposed mining area will be visible from portions of Highway 395. No scenic highways or rivers are located in the project vicinity.

Impact 4.2.5.1 Have a substantial adverse effect on a scenic vista

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.

Based on the simulation conducted, the proposed 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.

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 scenic highway. The site does not obstruct, interrupt, or detract from a valued focal point or panoramic vista, trail, or recreation area.

There will be no impact to a scenic vista.

Impact 4.2.5.2 Substantially damage scenic resources including trees, rock outcroppings, and historic buildings within a state scenic highway.

A significant impact would occur if the 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 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.

There will be no impacts to scenic resources.

Impact 4.2.5.3 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 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.).

The Project will alter the visual character of the site by physical disturbance of an additional area. 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 visual analysis concluded that the site will be visible. The project area is estimated to be visible from approximately 55,000 acres, which is not a change over baseline. Figures 4-1 and 4-2 depicted the estimated areas where the 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.

The towns of Litchfield and Standish are shielded from the mine by topographic features. The visual analysis determined that the project would result in impacts to lands to the west of the site. The majority of the parcels affected are large-tract agricultural properties. Less-than-significant impact.

Impact 4.2.5.4 Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area

The project is permitted to operate for 24-hour periods as needed. Visual impacts were analyzed in the 2019 EIR. This is a baseline condition and will not be modified. No additional sources of lighting are planned or anticipated in the expansion area. The project will not create a substantial new source of light or glare.

No project impacts are anticipated.

4.2.6 Mitigation Measures

No mitigation measures are required.

4.2.7 Level of Significance after Mitigation

The project will result in no impact to a scenic vista (4.2.5.1), scenic resources (4.2.5.2), or light and glare (4.2.5.4). Impacts to the existing visual character or quality of public views of the site (4.2.5.3) are less than significant.

The project will result in less-than-significant impacts to Aesthetic and Visual Resources.

4.3 Agriculture and Forestry Resources

The expansion of the mining area of the operation to include an additional 51 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 Section 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 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 project may have on the continued use of surrounding properties for agricultural production. The analysis is derived from the following sources and agencies:

- Lassen County. *Lassen County General Plan, Agricultural Element.*
- California Department of Conservation. *California Agricultural Land Evaluation and Site Assessment Model.* 1997.
- State of California. *Department of Conservation, Farmland Mapping and Monitoring Program.*
- United States Department of Agriculture (USDA), Natural Resources Conservation Service. *Soil Survey of Lassen County, California.*

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 51 acres of this habitat type. Reclamation in the current mine footprint will be undertaken beginning in 2020 to offset portions of the lost habitat.

The site is not covered by a Williamson Act contract. None of the project area is 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 California Environmental Quality Act (CEQA) review process.

4.3.2.1 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.

4.3.2.2 State

California Farmland Mapping and Monitoring Program (FMMP)
The 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 (Williamson 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 section 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 Section 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 section 51104(g) defines Timberland Production Zone (TPZ) as "*an area which has been zoned pursuant to [Government Code] Section 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).*"

4.3.2.3 Local

Lassen County General Plan (Agriculture Element)
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.

AG-1 POLICY: 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.

AG-2 POLICY: 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.

AG-3 POLICY: 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.

AG-4 POLICY: 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.

AG-5 POLICY: 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.

Implementation Measures:

AG-A The County shall phase out the use of the A-1, General Agriculture District, and shall, following appropriate public hearings, rezone all areas currently zoned A-1 to more specific zoning districts which are consistent with General Plan land use designations.

AG-B In areas zoned A-1, General Agriculture District, and having a General Plan natural resource management land use designation (e.g., Intensive Agriculture, Extensive Agriculture), the County will not approve subdivisions for general residential development, or approve the creation of parcels less than 40 acres in size, except in limited circumstances following review procedures and appropriate findings pursuant to the County's zoning ordinance (e.g., in connection with applications for segregation of homesites, use permits, etc.). Subdivisions for general residential purposes shall not be approved unless and until, after consideration of the area's natural resource values and factors which would support development, an amendment of the General Plan is approved by the County to designate the site for rural residential or other community development uses and the site is zoned accordingly.

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

AG-6 POLICY: 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.

Implementation Measures:

AG-C In any subsequent area plan, the County shall continue to identify areas which should be recognized as important agricultural lands and designate such lands as "Intensive Agriculture", and the County shall identify areas which have substantial but less intensive agricultural values and designate such lands as "Extensive Agriculture."

AG-D The policies of the Agriculture Element shall be considered during the development of related area plan policies.

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.

AG-7 POLICY: 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.

AG-8 POLICY: 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.

AG-9 POLICY: 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.

AG10 POLICY: 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.

AG11 POLICY: 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.

AG 12 POLICY: 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) saw mills 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.

AG13 POLICY: 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.

Implementation Measures:

AG-E The County will consider the findings under Policy AG-12 above in any land use decision which involves the conversion of land from an intensive or extensive agricultural designation to a land use designation, zoning district, or use which is not predominantly agricultural or directly related to an agriculture land use, except as noted in the exceptions of this element.

AG-F The County will periodically consider revisions of the zoning ordinance to consider and clarify land uses which may be allowed, or which should not be allowed, in agricultural districts.

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

AG 14 POLICY: 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.

AG 15 POLICY: 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.

Implementation Measures:

AG-G The County will continue to implement the Williamson Act and utilize land conservation contracts for qualifying lands.

AG-H The County may place lands in the "A-P", Agricultural Preserve Combining District, to establish the precise boundaries of agricultural preserves and to provide such additional restrictions upon the use of land as are necessary to comply with provisions of law which are applicable to agricultural preserves.

AG-I The County will consult with representatives of the agricultural industry in the consideration and implementation, when warranted, of innovative mechanisms for the protection of agricultural lands and for the support of the' agriculture industry. Measures may include, but are not limited to, land banks, transfer of development rights, voluntary conservation easements, and the use of buffer areas between agricultural lands and developing areas.

AG 16 POLICY: 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.

Implementation Measure:

AG-J The County will prepare and adopt guidelines and regulations to assist in the determination of the appropriate type and scope of agricultural buffer areas needed in circumstances that warrant the creation of such buffer areas.

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.

AG17 POLICY: 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.

AG18 POLICY: 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.

AG19 POLICY: 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.

AG20 POLICY: The County recognizes the need to protect and conserve areas where soils have high resource values especially in terms of potential agricultural productivity.

AG21 POLICY: 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.

Implementation Measures:

AG-K Pursuant to the California Environmental Quality Act, the County shall consider the impacts of proposed projects on areas having soils of locally significant agricultural value, whether currently used or not, and shall consider imposing necessary mitigation measures to avoid, reduce, or compensate for the extent of significant disturbance to those soils.

AG-L The County will consider the productive value of soil resources as a factor in adopting land use designations and zoning.

AG-M The County will form a task force made up of representatives of qualified agencies and organizations to clarify the local definition of "prime" and other

important agricultural lands and shall use such information to implement its General Plan policies and make related land use decisions.

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.

AG22 POLICY: 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.

Implementation Measures:

AG-N The County shall apply careful discretion in approving uses and zoning in areas adjacent to agricultural areas which may conflict with agricultural operations or future agricultural development in the area.

AG-O The County shall continue and may strengthen its development ordinances to support and protect the "right to farm" in ways similar to those specified in Title 6 of the Lassen County Code.

AG-P The County supports the continuation of reasonable fencing and cattle guard requirements for subdivisions adjacent to agricultural zones.

AG-Q The County shall, in compliance with the related policies of this plan which are intended to protect agriculture, incorporate the review criteria set forth in those polices into the County's application review processes for proposed land uses and rezoning in areas within or adjacent to agricultural areas.

AG23 POLICY: 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.

AG24 POLICY: 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.

AG25 POLICY: 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.

Implementation Measure:

AG-R The County shall maintain zoning and land division provisions which specify application and review processes for the segregation of homesites and creation of other parcels pursuant to this policy. The processes shall specify findings to clarify and determine when such proposals are justified.

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

AG26 POLICY: 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.

AG27 POLICY: 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.

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.

NR31 POLICY: 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.

Implementation Measures:

NR-M The County will continue to support the use of timber production zones (TPZ) and related programs to promote the productive management of timber resource lands.

NR-N Land with significant forest resources, unless identified and designated for unique and specific development opportunities, should be zoned: TPZ, Timber Production Zone District; U-C, Upland Conservation District; or U-C-2, Upland Conservation/Resource Management District.

NR33 POLICY: 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.

NR34 POLICY: 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.

NR35 POLICY: 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.

NR36 POLICY: 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.

NR37 POLICY: 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.

NR38 POLICY: The County supports successful reforestation of harvested and fire-damaged areas on private and publicly-owned timberlands.

4.3.3 Previous CEQA Review

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 Standards of Significance – Significant Criteria

In accordance with State CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. The criteria used to determine the significance of impacts may vary depending on the nature of the project. According to Appendix G of the State 2021 CEQA Guidelines, the proposed project would have a significant impact related to agricultural and forestry resources, if it would:

- 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

Impact 4.3.5.1 Conflict with existing zoning for agricultural use or a Williamson Act contract

The site is not covered by a Williamson site contract. Lassen County General Plan allows for mining in areas designated as Extensive Agriculture. There is no impact or conflict with existing uses or a Williamson Act contract.

Impact 4.3.5.2 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. There is no conflict or impact to forestland.

Impact 4.3.5.3 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 FMMP Important Farmland Map, no portion of the project site is designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; however, the proposed project site is designated as Grazing Land.

The Land Capability Classification (LCC) Rating. The 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 I to Class VIII, 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.

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

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.	

Table 4-4 PROJECT SOIL TYPES				
Map Unit Symbol	**Soil Name**	**Total Acres**	**% of Project Site**	**Land Capability Classification (LCC)**
302	Orhood, very stony sandy loam, 5-15% slope	6.6	12.9	7s
283	McConnel-Mattsville Complex, 9% slope	26.1	51.1	6e
179	Devada Rock Outcrop, 2-50% slope	18.3	36	7e
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 4-3 reflect the classification for non-irrigated soils. As indicated in Table 4-4, the project site does not include any LCC Class I or II soils (Prime Farmland). The site contains LCC Class 6 and 7 soils, which is not suited to cultivation but could be used as pasture, rangeland, grazing land, forestland, or wildlife habitat. Soils on the project site are identified as either Subclass "e" or "s", indicating the major issues are related to erosion and soil limitations within the rooting zone.

Because the soils onsite are of low capability class, the project would have a less-than-significant impact on Prime Farmland, Unique Farmland, and Farmland of Statewide Importance.

Impact 4.3.5.4 Involve other changes in the existing environment that, due to their location or nature, could result in conversion of farmland to nonagricultural use

The project will not result in the loss of prime farmland, unique farmland, or farmland of statewide importance. The project will result in the loss of approximately 51 acres of low capability grazing land. The project will not result in the conversion of farmland to non-agricultural use.

As discussed above, the project will not result in the loss of prime farmland, unique farmland, or farmland of statewide importance.

4.3.6 Mitigation Measures

No mitigation measures are required.

4.3.7 Level of Significance after Mitigation

The project will have no impact related to conflict with zoning for agricultural use or a Williamson Act contract (4.3.5.1), no impact related to forestland or timberland (4.3.5.2), and no impact related to conversion of farmland to non-agricultural use (4.3.5.4). Project impacts related to Prime Farmland mapped by the FMMP (4.3.5.3.) will be less than significant.

4.4 Air Quality

This section includes a discussion of the potential air quality impacts of the Project. Increasing production volume of the mine from 100,000 to 200,000 tons per year, expansion of the mine to include an additional 51 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 Section 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 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* (Air Quality Analysis) prepared for the Project by RCH Group in January 2021. The Air Quality Analysis is included as Appendix F.

4.4.1 Environmental Setting

The following information pertaining to the Air Quality setting of the Project site was obtained from the Air Quality Analysis prepared for the Project. 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. Mount Shasta rises 14162 feet in elevation, dominating the view from much of the basin. Another volcanic peak, Mount Lassen, stands 10457 feet high. Extensive forestland runs across saddles between the region's peaks. The volcanic Modoc Plateau extends across the northeastern expanse, with an elevation mostly above 4500 feet above mean sea level.

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 Project site. Shaffer Elementary School is located 2.4 miles to the southeast of the Project 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. The Ward Lake Pit 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.

4.4.2 Regulatory Setting

4.4.2.1 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.

4.4.2.2 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.

4.4.2.3 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 weak 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.

4.4.2.4 Local 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 $PM_{2.5}$ (PM_{10} 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 PM_{10} and $PM_{2.5}$ standards as well as ozone.

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.

According to the Lassen County 2012 Regional Transportation Plan, elevated PM_{10} 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 PM_{10}.

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, *Air Quality Standards*, Accessed January 26, 2021, https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards.

Table 4-6
AIR QUALITY DATA SUMMARY (2017 -2019)

	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 (µg/m^3)[b]	35	**79**	**143**	**74**
Days over National Standard		**26**	**57**	**4**
State Annual Average (µg/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; µg/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 based on 365 days per year.

Source: California Air Resources Board, Air Quality Trend Summaries, https://www.arb.ca.gov/adam/trends/trends1.php

4.4.2.5 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 vary 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.

4.4.2.6 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.
>
> NR-Q: The County will continue to regulate the emission of pollutants within its jurisdiction through the regulations and procedures adopted for the Lassen County APCD.
>
> NR-R: In review of proposed projects pursuant to the CEQA, the County shall consider potential air quality impacts and shall, through the APCD, support appropriate measures for mitigation of significant environmental impacts upon air quality.
>
> 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.

4.4.3 Previous CEQA Review

4.4.3.1 1981 EIR

The 1981 *Environmental Impact Report for Operation of Aggregate Materials Source Operation of Rock Crushing Plant Operation of Asphalt Concrete Batch Plant (S.C.H. #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.

4.4.3.2 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 that the 1996 Initial Study conducted for the Project concluded that the APCD measures included therein, which were included as conditions to the new APCD permit in 1996 and included AB2588 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. These conditions are listed below:

  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 strut 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.

4.4.3.3 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 for the Project. The Health Risk Assessment prepared for Project 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

Significant air quality impacts that could occur were determined from the 2021 CEQA Guidelines. These guidelines provide guidance in defining air quality impacts. Based on this guidance, a project may be deemed to have a significant impact to air quality if it will:

- 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, and
    - (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, NOx, PM_{10}, 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 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 51 acres of mining area. The typical and maximum daily operations are not expected to change as a result of the proposed Project. 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 potential air quality impacts of the Project are discussed below.

Impact 4.4.5.1 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 Air Pollution Control District. Therefore, Lassen County is not subject to an air quality plan. The Project is subject to the Lassen County Air Pollution Control District rules and regulations.

The Air Quality Analysis prepared for the Project includes estimates of the daily and annual emissions for Project operations. The analysis prepared for the Project by RCH Group 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 offroad equipment such as loaders, excavators, and dozers). The regulatory models used to estimate the air quality impacts of the Project are described in detail in the Air Quality Analysis

included as Appendix F. The supporting information, methodology, assumptions, and results used in the analysis are provided in Attachment A of the Air Quality Analysis.

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 (proposed Project minus existing conditions) emissions of the proposed Project. The annual emissions for the existing conditions, for the proposed Project, and the annual incremental (proposed Project minus existing condition) emissions for the proposed Project are included in Tables 4-10, 4-11, and 4-12 respectively.

Table 4-7
EXISTING CONDITIONS DAILY EMISSIONS (POUNDS)

Emission Source	ROG	CO	NOX	SO2	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	-	-	-	-	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	NOX	SO2	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**	**NOX**	**SO2**	**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 Increment	**0**	**0**	**0**	**0**	**3.38**	**0.51**
Significance Threshold	150	550	150	-	150	150
Significant (Yes/No)	No	No	No	-	No	No
Source: RCH Group 2021						

Table 4-10 EXISTING CONDITIONS ANNUAL EMISSIONS (TONS)						
Emission Source	**ROG**	**CO**	**NOX**	**SO2**	**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**	**NOX**	**SO2**	**PM_{10}**	**$PM_{2.5}$**
Onsite Equipment	0.06	0.61	0.39	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					0.47	0.07
Wash Plant					0.13	0.02
Sand Plant					0.13	0.02
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	**0.44**	**6.27**	**52.7**	**20.4**	**3.63**	**1.11**
Source: RCH Group 2021						

Table 4-12 ANNUAL INCREMENT EMISSIONS (POUNDS)						
Emission Source	**ROG**	**CO**	**NOX**	**SO2**	**PM_{10}**	**$PM_{2.5}$**
Existing Condition	0.42	6.00	52.5	20.4	2.51	0.94
Proposed Project	0.44	6.27	52.7	20.4	3.63	1.11
Project Increment	**0.02**	**0.27**	**0.17**	**0.00**	**1.12**	**0.17**
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 Air Pollution Control District has Best Available Control Technology (BACT) emission thresholds for the criteria pollutants ROG, NOx, PM_{10}, $PM_{2.5}$, and CO which apply to the operation of the Project. The additional daily emissions of ROG, CO, NOx, PM_{10}, 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, NOx, PM_{10}, and $PM_{2.5}$ are less-than-the significant thresholds.

The Air Quality Analysis includes reasonable precautions to prevent particulate matter from becoming airborne consistent with Lassen County Air Pollution Control District Rule 4:18. These precautions are included as Mitigation Measures 4.4-1 through 4.4-4. Implementation of these measures will ensure the Project is in compliance with Lassen County APCD rules and regulations.

Impact 4.4.5.2 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 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 Project are included in the tables above. The Project is not expected to result in a new violation. Cumulative air quality impacts will be less than significant.

Impact 4.4.5.3 Expose sensitive receptors to substantial pollutant concentrations

A Health Risk Assessment (HRA) was included in the Air Quality Analysis completed by RCH Group for the Project to address health impacts on existing residences and schools from diesel generators and off-road equipment associated with the aggregate extraction 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, offroad 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 vender 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 Attachment B of the Air Quality Analysis.

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 0.49 per million and for a residential-child receptor would be 1.79 per million.

Therefore, the incremental cancer risk for a residential-adult receptor would be 0.32 per million and for a residential-child receptor would be 0.41 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 offroad 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 51 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 non-carcinogenic 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 $\mu g/m^3$. Thus, the proposed Project-related annual concentration of DPM cannot exceed 5.0 $\mu g/m^3$; resulting in a chronic acute HI of greater than 1.0 (i.e., DPM annual concentration/5.0 $\mu g/m^3$). 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 Project would be less than significant.

Impact 4.4.5.4 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.

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 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 include odorous compounds at the low concentrations expected. The odor emissions, if any, would be unlikely to cause a nuisance to the nearby residential areas. With respect to the proposed Project, diesel-fueled equipment exhaust would generate some odors. However, 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. Given the previous information, odor impacts associated with the location of the Project would be less than significant.

4.4.6 Mitigation Measures

The following mitigation measures (MM) were included in the Air Quality Analysis for the Project to 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:

MM 4.4-1 Cover trucks. Covering open bodied trucks when used for transportation materials likely to give rise to airborne dust.

MM 4.4-2 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.

MM 4.4-3 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.

MM 4.4-4 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

Mitigation Measures 4.4-1 through 4.4-4 above will reduce fugitive dust (particulate matter) from the Project and to ensure impact 4.4.5.1 will be less than significant. The other potential Air Quality impacts were determined to be less than significant and no mitigation measures are required.

4.5 Biological Resources

Expansion of the mining boundary of the current mining operation to include an additional 51 acres 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 biological resources or a substantial increase in the severity of previously identified significant effects under CEQA Guidelines Section 15162.

Impacts to biological resources of the existing operation were evaluated in the 2019 EIR. The 51-acre expansion area was not included in the 2019 EIR. 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 by VESTRA Resources. The environmental information in this section is based off information contained in the BRA. The BRA is included as Appendix D.

4.5.1.1 Site Vegetation

The mine site has operated since the early 1980s. Portions of the site are currently being mined and 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 (CWHR) classification is sagebrush (Mayer and Laudenslayer 1988) as shown on Figure 4-3.

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. Sagebrush habitat borders the quarry operations area along the western and eastern edges.

4.5.1.2 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 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 CESA (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);

A list and summary of wildlife species identified by a CNDDB search within five miles of the Project site, CWHR analysis or literature review, and descriptions of their potential to occur

within the project area are included in Table 4-13. Federally listed species which may occur in the project area was obtained from the USFWS.

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	FT/--	Alkaline desert seeps dominated by saltgrass	No potential for occurrence due to lack of suitable habitat
Amphibians			
Foothill yellow-legged frog *Rana boylii*	--/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 *Agelaius tricolor*	--/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 *Aquila chrysaetos*	--/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 *Circus cyaneus*	--/CSC	Grasslands, fields, and marshes	Potential for occurrence due to suitable foraging habitat
Swainson's hawk *Buteo swainsoni*	--/CT	Large, open grasslands in riparian systems	Potential for occurrence due to some suitable foraging habitat
Greater sandhill crane *Grus canadensis tabida*	--/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 *Centrocercus urophasianus*	--/CSC	Open, continuous sagebrush communities	Potential for occurrence due to suitable habitat
Burrowing owl *Athene cunicularia*	--/CSC	Open, dry grassland, desert, and shrub	None found during April 2020 survey. Potential for occurrence due to suitable habitat
Long-eared owl *Asio otus*	--/CSC	Roost in dense vegetation and forage in open grasslands or shrublands	Potential for occurrence due to suitable foraging habitat
Short-eared owl *Asio flammeus*	--/CSC	Large, open areas with low vegetation including prairie, grassland, shrubsteppe, agricultural areas	Potential for occurrence due to suitable habitat
Loggerhead shrike *Lanius ludovicianus*	--/CSC	Open areas with short vegetation and well-spaced shrubs or low trees	Potential for occurrence due to suitable habitat
Mammals			
Pallid bat *Antrozous pallidus*	--/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 *Corynorhinus townsendii*	--/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 *Canis lupus*	FE/CE	Highly variable	No records in project vicinity in 93 years; has been located recently in other areas of Lassen County

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**
North American wolverine *Gulo gulo luscus*	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 *Taxidea taxus*	--/CSC	Dry, open stages of shrub and forest with friable soils	Potential for occurrence due to suitable habitat
Pygmy rabbit *Brachylagus idahoensis*	--/CSC	Sagebrush, bitterbrush, and pinyon-juniper	Potential for occurrence due to suitable habitat
White-tailed jackrabbit *Lepus townsendii townsendii*	--/CSC	Sagebrush, subalpine conifer, juniper, alpine dwarf-shrub, and perennial grassland	Potential for occurrence due to suitable habitat
Key: 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:

- 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 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.

4.5.1.3 Special-Status Plants

Special-status plant species include plants that are (1) designated as rare by CDFW or USFWS or are listed as threatened or endangered under the CESA or ESA; (2) proposed for designation as rare or listing as threatened or endangered; (3) designated as state or federal candidate species for listing as threatened or endangered; and/or (4) ranked as California Rare Plant Rank (RPR) 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 CNDDB and a nine-quad search (Tunnison Mountain, Petes Valley, Karlo, Johnstonville, Litchfield, Shaffer Mountain, Janesville, Standish, and Wendel Hot Springs) of CNPS database records.

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	Identified Onsite
Winged dock (*Rumex venosus*)	2B.3	May-June	Great Basin scrub (sandy); 1200-1800 m	No	NA
Western seablite (*Suaeda occidentalis)*	2B.3	July-September	Great Basin scrub (alkaline, mesic); usually in wetlands; 1200-1500 m	No	NA
Playa phacelia (*Phacelia inundata*)	1B.3	May-August	Usually in wetlands; sagebrush scrub, lower montane coniferous forest; 1350-2000 m	No	NA
Ornate dalea (*Dalea ornata*)	2B.1	June	Pinion-Juniper woodland; 1365-1700 m	Yes	No
Spiny milkwort (*Polygala subspinosa*)	2B.2	May-August	Sagebrush scrub, Pinion-Juniper woodland, gravelly, rocky; 1330-1705 m	Yes	Yes
Susanville beardtongue (*Penstemon sudans*)	4.3	June-July	Great Basin scrub, lower montane coniferous forest (openings), Pinyon-Juniper woodland; volcanic, rocky, sometimes roadsides; 1200-2425 m	Yes	No

Key: 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.

Six plants ranked 1B or 2B by the CNPS California Rare Plant Ranking (CRPR) are recorded in the CNDDB within five miles of the proposed expansion area. Plant species listed on the CNPS CRPR are considered during this assessment as they meet the definition of Threatened or Endangered under sections 2062 and 2067 of the California Fish and Game code. (CRPR listed as 1, 2, or 3 meet definition of Threatened/Endangered under CESA). The six CRPR plants species and a summary of their potential to occur within the proposed project area are included in Table 4-14. 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.

4.5.1.4 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.

4.5.1.5 Critical Habitat

The project site is not located within designated critical habitat for any special-status species; however, the site is within the mule deer critical winter range, and an antelope winter range and kidding ground are also found in the area of the site. These areas are shown on Figure 4-4 and Figure 4-5, respectively.

Seasonal migration patterns of mule deer show utilization of high-elevation montane ranges in summer to low-elevation ranges in fall and winter. Mule deer foraging habitat selection may also 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).

The Ward Lake Pit is located adjacent to known Critical Winter Range of CDFW Region 1 mule deer population. Critical deer winter range can include corridors essential for movement, staging areas where deer temporarily congregate, or habitats containing high quality winter forage. Shaffer Mountain is located at the southwestern corner of the critical winter range, which 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.

4.5.1.6 Wetland Habitat

The project site does not contain any wetlands or other surface waters.

4.5.2 Regulatory Setting

4.5.2.1 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.

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). Mitigation measures can be identified to avoid or minimize adverse effects on migratory birds. Nesting habitat is present throughout the study area in juniper and willow trees, shrubs, ground, and other structures.

4.5.2.2 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. Project features will be implemented to protect nesting migratory birds and birds of prey to comply with this code.

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. Project features will be implemented to protect nesting migratory birds and birds of prey to comply with this code.

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). 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 to 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, State 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 or 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.

4.5.2.3 Local

Lassen County General Plan Land Use Element

The 2000 Lassen County General Plan was adopted in September 1999. The 2000 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 2000 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.
- LU-49 Policy: 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 W-1: To protect and enhance the overall health of wildlife habitats and special resource areas to maintain healthy, abundant and diverse wildlife populations.
- WE-1 Policy: 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.
- WE-2 Policy: 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, polices, and voluntary programs to protect wildlife resources within these areas.

- WE-5 Policy: 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.
- WE-6 Policy: 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.
- WE10 Policy: 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.
- WE17 Policy: 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 1986 Standish-Litchfield Area Plan contains the following goals, objectives, and policies related to biological resources:

- Issue: Wildlife/Fishery Resources

Goal and Objective: 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.

- Issue: Rare and Endangered Plants and Animals

Goal and Objective: Protect the Planning Area's rare and endangered plants and animals

- Issue: Natural Vegetation Resources

Goal and Objective: 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 shall be designated for Intensive or Extensive Agriculture, Conservation or Open Space.

- 9.1: The County Planning Department shall review all proposed projects for their possible adverse or beneficial impacts to fish and wildlife habitats.
- 9.2: Lands designed to protect wildlife should be zoned "E-A", Exclusive Agriculture, or "U-C", Upland Conservation District or "O-S, Open Space. In some instances, these districts should be combined with a "PUD," Planned Unit Development, District to encourage preservation of unique site characteristics or encourage innovative design. One example of how the PUD designation could be applied is by clustering residential units in order to leave more area open to wildlife.
- 9.3: Land designated conservation or open space shall be zoned "O-S," Open Space, or other appropriate zoning districts which further use the intent of Policy 11-A.

4.5.3 Previous CEQA Review

4.5.3.1 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.

1. **Impacts to Pronghorn and Mule Deer Herds**
    a. *Limits on operations from December to March 31 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 reseeding process to allow for return of the land to suitable grazing and for efficient erosion control in quarry areas and along roadways.*

4.5.3.2 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 Environmental Impact Report (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:

1. *Impacts to Pronghorn and Mule Deer Herds*

    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 1 to March 31. No grading or equipment use on the site shall be allowed between December 1 and March 31 annually.*

A seasonal restriction of operations was recommended 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. Originally, the CDFW proposed a seasonal restriction of operations onsite between December 1 and March 31 annually to reduce impacts to pronghorn and mule deer. 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 proposed the 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 1 and March 31 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.

4.5.3.3 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 at the Project site as well impacts from increased nighttime truck traffic on area roadways.

Project-level and cumulative impacts of onsite nighttime operation and traffic from the Project were determined to have a less-than-significant impact on any special-status species in the Project 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 to March 31. Impacts can be lessened through continuing seasonal operating restrictions included in the Condition of Approval for Use Permit 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 1 and March 31 annually.*

b) *Operator shall conduct no nighttime operations (7:00 p.m. to 6:00 a.m.) during the period of January 1 to March 31. 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 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. However, nighttime operations are prohibited for this period. Nighttime operations are prohibited from January 1 to March 31. Nighttime operations between April 1 and December 31 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 Project would not result in any additional impacts to pronghorn or mule deer; 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

Significant impacts that could occur were determined from the 2021 CEQA Guidelines. These guidelines provide guidance in defining significant biological resource impacts. Based on this guidance, a project may be deemed to have a significant impact on biological resources if it will:

- 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);

- 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 DFG 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 Project will expand the current mining operation to include an additional 51 acres of land to be used as a rock quarry. The Project site does not include any wetlands or surface waters; therefore, the Project will not result in impacts to riparian areas, or result in removal, filling, or hydrological interruption of wetlands. The Project site does not include sensitive natural communities. There are no habitat conservation plans, natural community conservation plans, or related documents for the Project site for which the Project could conflict. As such, this analysis addresses the Project impacts to special-status species and the movement of resident and wildlife species (American pronghorn and mule deer).

Impact 4.5.5.1 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)

The BRA prepared for the Project identified 13 special-status wildlife species and three special-status plant species as having the potential to occur within the Project area. Potential effects to these species as well as raptors and migratory birds are discussed below. Impacts to special-status species, migratory birds, and raptors are potentially significant without mitigation incorporated.

Birds

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. This species is an uncommon resident throughout California and a migrant in 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. There is little data on golden eagle abundance in California and the data that does exist does not show strong trends. Threats to this bird include loss of foraging areas and nesting habitat, and historical pesticide poisoning.

Potential foraging habitat exists in the open sagebrush areas of the project area. Disturbance of an additional 51 acres of land may result in the loss of foraging area for this species. The proposed project area is not a known foraging location for golden eagles; according to CNDDB, there are no known golden eagle occurrences within five miles of the proposed expansion area. No project impacts to golden eagles are anticipated. Mitigation measures to restore habitat described in the Reclamation Plan will be taken to protect eagles if they occur in the proposed project area.

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.

Potential foraging habitat for northern harriers exists in the proposed expansion area. Disturbance of an additional 51 acres of land may result in the loss of foraging area for this species. The proposed project area is not a known foraging or breeding location for northern harriers; according to CNDDB, there are no known occurrences within five miles of the proposed expansion area. No project impacts to northern harriers are anticipated. Mitigation measures to restore habitat described in the Reclamation Plan will be taken to protect northern harriers if they occur in the proposed project 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 CNDDB, 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 suitable for nesting within the project area. Disturbance of an additional 51 acres of land may result in the loss of foraging habitat for this species. Foraging birds likely avoid the area because of ongoing project activities. No Swainson's hawks were observed during site surveys. No project impacts to Swainson's hawks are anticipated.

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 CNDDB; the closest record is 58 miles to the north. Potential breeding and nesting habitat exists in the open sagebrush areas of the project area. Although there are no nearby records, there is suitable habitat within the project area and surrounding areas. Disturbance of an additional 51 acres of land may result in the loss of habitat for this species. No leks or signs of sage grouse activity were located in the proposed project area, and nesting birds will likely avoid the area because of ongoing project activities. No adverse project impacts to greater sage-grouse are anticipated.

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.

There are no records of burrowing owls within five miles of the project area in the CNDDB. Although there are no nearby records, this species was considered during site survey because suitable habitat exists within the project area and surrounding areas. There is currently no known nesting sites located in or near the project area, and any potentially nesting birds likely avoid the area because of ongoing project activities. Burrowing owls and burrows were not observed within the proposed project area during site surveys. Mitigation measures described in the

reclamation plan will be taken to minimize any disturbance if burrowing owls are observed onsite.

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 CNDDB. Although there are no nearby records, there is suitable foraging habitat within the project area and surrounding areas. The addition of 51 acres to the project area will likely disturb foraging habitat for this species. Any birds will likely avoid the area because of ongoing project activities and will forage in adjacent habitat. 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. No project impacts to long-eared owls are anticipated.

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 CNDDB. Although there are no nearby records, there is some suitable habitat within the open shrubland of the project area and surrounding areas. 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. Any owls foraging in the area will likely avoid the project area and will forage in adjacent undisturbed habitat. No project impacts to short-eared owls are anticipated.

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 CNDDB. Although there are no nearby records, there is suitable habitat within the open shrubland of the project area and surrounding areas. There are currently no known nest occurrences located in or near the project area, and nesting birds will likely avoid the area to utilize adjacent undisturbed sagebrush habitat. No project impacts to loggerhead shrikes are anticipated.

Mammals

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, it 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 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 survey. Any badgers in surrounding areas likely avoid the project area due to a close proximity to ongoing operations in the current mining area. No project 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 burrow 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; however, there is suitable sagebrush habitat for this species, so they could potentially occur. No pygmy rabbits were observed during site surveys. Pygmy rabbits in surrounding areas likely avoid the project area due to the close proximity to ongoing operations. No project impacts to pygmy rabbits are anticipated.

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 sagebrush habitat for this species, so they could potentially occur. The disturbance of an additional 51 acres could result in the loss of habitat for this species. No white-tailed jackrabbits were observed during site surveys. White-tailed jackrabbits in surrounding areas likely avoid the project area due to the close proximity to ongoing operations. No project impacts to white-tailed jackrabbits are anticipated.

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 such as 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 mentioned above, which is often in buildings, caves, or cracks in rocks (Brylski et al. 1998). 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; however, there is suitable foraging habitat within the open shrubland of the project area and surrounding areas and rock outcroppings in the proposed project area could provide roosting habitat. No bats or sign of bats were observed in rock outcroppings during the site survey. No other potential habitat was identified onsite. No project impacts to pallid bats are anticipated.

Susanville Beardtongue
Penstemon sudans
CRPR 4.3
Susanville beardtongue is a perennial herb/subshrub that is native to California and is also found in Nevada. It is adapted to open rocky, igneous soils in sagebrush scrub and montane forest habitats between 1200 and 2200 meters. The species is ranked by the CNPS as 4.3, plants of limited distribution in California. The nearest documented observation of Susanville beardtongue was approximately seven miles from the Ward Lake Quarry, on the northeast side of Shaffer Mountain. This species has the potential to occur within the proposed additional project area due to the rocky slopes within the appropriate elevation range.

During a 2019 site survey, Susanville beardtongue was observed outside of the proposed expansion area. None was observed in the proposed expansion area during the spring 2020 survey. No impact will occur.

Spiny Milkwort
Polygala subspinosa
CRPR 2B.2
Spiny milkwort is a perennial herb native to California, though original observations were in the Southwestern United States. 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 the CNPS as 2B.2, classified as moderately rare, threatened or endangered in California but more common elsewhere. The nearest documented observation of this plant was in a gravelly wash located six miles east of the Ward Lake Quarry. Spiny milkwort has the potential to occur within the project area due to the gravelly and rocky soils that exist in the proposed expansion area.

The 2018 site survey determined the presence of spiny milkwort due east of the current operations. The plant was observed growing on a southwest-facing slope along the southern border of the site near BLM. The observed habitat was on steep, rocky slopes growing among other vegetation including perennial grasses and annual forbs. The proposed work may impact spiny milkwort within the proposed additional mining area. Mitigation measures should be considered to reduce adverse impacts to this species.

Ornate Dalea
Dalea ornata
CRPR 2B.1
Ornate dalea is a perennial forb that is native to California that commonly grows on open, rocky hillsides at elevations between 1365 and 1700 meters. This species is known to occur on the Modoc Plateau. The 2018 survey conducted for ornate dalea found no observations of the species. The nearest sighting was approximately two miles from the proposed expansion area. Previous observations of ornate dalea have occurred within one mile of hydrological drainages. Ornate dalea was not observed within the proposed project area or surrounding areas during the site survey. No project impacts to this species are anticipated.

Direct effects of the proposed Project are those immediate impacts resulting from the proposed expansion. Potential direct effects of the proposed Project to special-status wildlife species are the loss of habitat due to ground disturbance, materials handling, and associated noises.

The proposed quarry will involve disturbance of native vegetation and reconfiguration of slopes within the proposed Project area. Such a change in topography will cause a loss of habitat in the area for the 30-year duration of the Project. A portion of the proposed expansion area has historically been disturbed; the grading from an old access road, possibly from public land use, is observable through aerial imagery and onsite.

Direct Effects to Birds
The proposed expansion will result in the loss of 51 acres of available sagebrush habitat during the course of the Project. Bird species which utilize sagebrush shrub habitat for foraging or nesting will likely avoid the site and seek adjacent areas with undisturbed land. Noise and vibrations generated by heavy equipment operation may cause a disturbance to nesting and foraging birds. However, noise and vibrations associated with mining work already occur in the active Project area and any birds in the area are likely acclimated to these noise levels. Foraging birds will avoid the site by changing flight patterns while Project work occurs. Areas of the current quarry will be reclaimed, which will restore habitats. No significant effects to birds are

expected as a result of the proposed Project site expansion. Vegetation removal should occur outside of the nesting season.

Direct Effects to Mammals
The proposed expansion will result in the loss of 51 acres of available sagebrush habitat during the course of the Project. This could mean a loss of foraging and breeding habitats. Mammalian species which utilize sagebrush shrub habitat will likely avoid the site and seek adjacent undisturbed open space which consists of large expanses of sage brush habitat. Noise and vibrations generated by heavy equipment operation may cause a disturbance to mammals. However, noise and vibrations associated with mining work already occur in the active Project area and any mammals in the area are likely acclimated to these noise levels. Noise impacts to pronghorn habitat will be reduced through design features. Areas of the current quarry will be reclaimed, which will restore habitats. In addition, habitat enhancement and non-native annual control will be undertaken in non-disturbed areas. No significant effects to mammals are expected as a result of the Project site expansion.

Direct Effects to Plants
A loss of vegetation within the proposed expansion area will occur during the course of the Project. A site survey for special-status plants that were determined to have the potential to occur found that two special-status plants occur within the proposed expansion area. It is possible that these plants may be adversely impacted by the proposed work. Site surveys will be completed prior to vegetation removal. Mitigation measures may be implemented to avoid or reduce such impacts.

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. The Project will result in an increase in human presence within the proposed expansion area for the duration of Project activities, which could potentially result in increased disturbance or stress to special-status wildlife. A loss of vegetation may reduce the abundance of species in the Project area. After the completion of the Project, reclamation activities will restore the site to its previous setting, which will provide valuable habitat to wildlife.

Impact 4.5.5.2 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 Project is located within the CDFW-designated critical winter-range habitat for mule deer and winter-range habitat for pronghorn antelope. 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. Pronghorn antelope are less specifically predictable in their seasonal movements and do not have such a pronounced elevational change in summer and winter. 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 regular and predictable in their movements, but many of the concerns are similar.

Potential impacts to mule deer and antelope from the Project include direct habitat loss and displacement from human disturbance.

a. Habitat Loss

The sagebrush habitat surrounding the Project area provides habitat for mule deer (*Odocoileus hemionus*) and American pronghorn (*Antilocapra americana).* The Project includes spatial expansion of the existing mining boundary that would physically disturb and reduce additional 51-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 an browsing by both wildlife and livestock until the plants are well established, as well as monitoring to ensure compliance.

Following mining activities, the site will be reclaimed and the habitat will be restored. The seed mix proposed for reclamation in the expansion area is similar to the seed mix approved by CDFW for the existing quarry. Reclamation of the mining area following mining activities will restore the sagebrush habitat and provide forage for mule deer and American pronghorn. Impacts related to temporary habitat loss will be less than significant.

b. Displacement

Expansion of the mining area by an additional 51-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 phonology or the spring green-up due to noise and activity at the site. The 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 #2018-003 limiting mining activities from January 1 to March 31 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 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.

4.5.6 Mitigation Measures

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

MM 4.5-1 Preservation of remaining habitat onsite. This option would preserve the remaining habitat onsite and involve no additional mining beyond the additional planned 51 acres. Applicant would consent to setting land aside from future development. Most of the surrounding parcels are zoned for development for agricultural or natural resource extraction purposes, so setting undeveloped land aside would ensure undisturbed wildlife habitat.

MM 4.5-2 Partial avoidance. This option would involve locating the proposed Project work in the least environmentally sensitive area in order to avoid disturbance of the rare plant community. Protocol-level surveys will be completed during an appropriate time of year, when the plant is in flowering stage. The area identified as environmentally sensitive would be protected by a buffer zone.

MM 4.5-3 Offsite acquisition of sensitive plant communities. This option would involve compensating for any loss of sensitive/rare plant communities. This can be achieved through the permanent protection of an offsite native population, permanent protection of an offsite introduced population, or creation and protection of an onsite population. The former is preferred as the success rate of onsite introduction of rare plants is low due to the little knowledge about their specific habitat requirements.

MM 4.5-4 Habitat enhancement. This option would involve enhancing habitat on the Project parcel or nearby parcels to provide additional cover and foraging opportunities for wildlife species.

MM 4.5-5 Bird nest avoidance. Vegetation will be removed outside of bird nesting season (February through August), to the extent possible, to avoid impacts to shrub-nesting birds.

MM 4.5-6 Limits on operation. The operator shall continue limits on operations from January 1 to March 31. 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 1 and March 31 Annually.*

MM 4.5-7 Operating conditions of Use Permit #2018-003. The operator shall continue the Conditions of Approval for Use Permit Amendment #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

The Project may result in potential impacts to several special-status species if present in the Project area. This impact (4.5.5.1) is determined to be less than significant with incorporation of Mitigation Measures (MM) 4.5-1 through 4.5-7 listed in Section 4.5.6. Impacts related to pronghorn and mule deer direct habitat loss (Impact 4.5.5.2(a)) will be less than significant.

Adherence to the existing Operating Conditions (Mitigation Measures 4.5-6 and 4.5-7) for the current operation and implementation of the other mitigation measures listed in Section 4.5.6 will reduce displacement impacts to American pronghorn and mule deer (Impact 4.5.5.2(b)) 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.

4.6 Cultural and Tribal Cultural Resources

Expansion of the mining boundary to include an additional 51 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 Section 15162.

Impacts to cultural resources for activities occurring within the currently permitted mine boundary were evaluated in previous EIRs. The Project includes the expansion of the current mining operation to include an additional 51 acres. The expansion area has not been evaluated in previous EIRs. This section analyzes the potential effects on cultural resources within the Project expansion area. Impacts to tribal cultural resources are also discussed in this section.

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 Project. The primary source of information in this section is the *Archaeological Survey Report, Ward Mine Expansion Project* prepared by ALTA Archaeological Consulting (ALTA) dated October 2020.

4.6.1 Environmental Setting

The following information was obtained from the Archeological Survey Report (ASR) prepared for the Project.

4.6.1.1 Environment

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 4190 to 4560 feet above mean sea level. 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 rhyoltic 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 (*Agrophyron* spp.) and fescues (*Festucac* spp.*)* were noted within the Project area.

4.6.1.2 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 +(7,000BP) 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 (3500-1300 BP) demonstrates a fluorescence 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 (1300-600 BP) is marked by major changes in land-use. The elaboration of archaeological assemblages noted in the Middle Archaic Period abruptly cease at approximately 1000 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 or 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).

4.6.1.3 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).

4.6.1.4 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.

4.6.1.5 Cultural Resources within Expansion Area

The *Archaeological Survey Report Ward Mine Expansion Project* was prepared by ALTA Archaeological Consulting (ALTA) 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 Project 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 find 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

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.

4.6.1.6 Tribal Cultural Resources

Assembly Bill 52, which went into effect in July 2015, is an amendment to CEQA Section 5097.94 of the Public Resources Code. AB52 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 (TCRs).

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 NHAC 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.

4.6.2 Regulatory Setting

4.6.2.1 State

California Environmental Quality Act

The CEQA applies to certain projects requiring approval by State and/or local agencies. Property owners, planners, developers, as well as State and local agencies, are responsible for complying with CEQA's requirements regarding the identification and treatment of historical resources. Applicable California regulations are found in California PRC Sections 5020 through 5029.5 and Section 21177, and in CEQA (CCR Sections 15000 through 15387). CEQA equates a substantial adverse change in the significance of a historical resource with a significant effect on the environment (PRC Section 21084.1). A substantial adverse change includes demolition, destruction, relocation, or alteration that would impair the historical significance of a resource (PRC Section 5020.1). PRC Section 21084.1 stipulates that any resource listed in, or eligible for listing in, the California Register of Historical Resource (CRHR) is presumed to be historically or culturally significant. Under CEQA, cultural resources that will be affected by an undertaking must be evaluated to determine their eligibility for listing in the CRHR (PRC Section 5024.1(c)).

For a cultural resource to be deemed eligible for listing, it must meet at least one of the following criteria:

1) is associated with events that have made a significant contribution to the broad patterns of California History and cultural heritage; or

2) is associated with the lives of persons important to our past; or
3) embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possess high artistic value; or
4) has yielded or is likely to yield, information important to prehistory or history.

The eligibility of archaeological sites is usually evaluated under Criterion 4 –its potential to yield information important to prehistory or history. Whether or not a site is considered important is determined by the capacity of the site to address pertinent local and regional research themes. The process for considering cultural resources on CEQA projects is essentially linear, although in practice it may overlap or be compressed. Evaluating prehistoric properties involves four basic tasks: (1) development of an archaeological research design (2) field excavations, (3) laboratory analysis, and (4) report preparation and eligibility determination.

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

4.6.2.2 Local

Standish-Litchfield Area Plan
The Standish-Litchfield Area Plan contains the following Policy and Implementation measures related to cultural resources:

- Policy 12-A: The County shall within its authority, preserve and protect the cultural resources of the Planning Area.
- Implementation 12.1: Development projects shall be designed to minimize their impact on cultural resources. Any discoveries of archeological resources during construction shall be reported for mitigation.
- Implementation 12.2: A cultural resources map should be maintained by the County Planning Department and used in the review process of land development projects.
- Implementation 12.3: Projects which may disturb cultural resources because of grading or other earth moving activities should be required to perform an archeological reconnaissance prior to construction. Archeological reconnaissance should be conducted whenever it appears cultural resources may be disrupted by proposed development project.

4.6.3 Previous CEQA Review

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.

4.6.3.1 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 file 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 paces within the project area. The State Parks and Recreation Booklet "California Historical Landmarks", was also reviewed and showed no landmarks within the proposed 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.

4.6.3.2 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.*

4.6.3.3 2019 EIR

The Initial Study prepared in 2018 for the current operation determined 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 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

Significant impacts that could occur were determined from the 2021 CEQA Guidelines. These guidelines provide guidance in defining significant cultural and tribal cultural resource impacts. Based on this guidance, a project may be deemed to have a significant impact to cultural resources or tribal cultural resources if it will:

- Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5
- Disturb any human remains, including those interred outside of formal cemeteries
- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe

4.6.5 Impact Analysis

The project includes expansion of the existing mining boundary to include an additional 51 acres. Ground disturbance and material extraction will occur within the expansion area which could result in physical demolition, destruction, relocation or alteration of cultural or tribal cultural resources present within the expansion area. In addition, previously undiscovered human remains could be encountered over the course of the project.

Impact 4.6.5.1 The Project would cause a substantial adverse change in the significance of a historical or archaeological resource pursuant to § 15064.5

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.

Property proponents and the Lead Agency are responsible for complying with CEQA's requirements regarding the treatment of historical resources. CEQA equates a substantial adverse change in the significance of a historical resource with a significant effect on the environment. A substantial adverse change includes demolition, destruction, relocation, or alteration that would impair the historical significance of a resource.

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.

Impact 4.6.5.2 The Project would disturb human remains, including those interred outside of formal cemeteries

No human remains are known to existing within the project site. However it is possible human remains could be encountered over the course of the project. Impacts related to the disturbance of human remains are potentially significant.

Impact 4.6.5.3 The Project would 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 NHAC 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 (December 5, 2020), no response has been received from any of the groups consulted as part of this outreach effort.

As discussed under impact 4.6.5.1, the cultural resource identified within the expansion area (ALTA_PRE-01) is potentially eligible for the CRHR. 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.

4.6.6 Mitigation Measures

The following mitigation measures (MM) are proposed for the significant project impacts:

MM 4.6-1 Avoidance of cultural resources. Project proponents should avoid altering potentially eligible cultural resources. Under CEQA, cultural resources that will be affected by an undertaking must be evaluated to determine their eligibility for listing in the CRHR (PRC Section 5024.1(c)). If resources cannot be avoided by the project then they should be formally evaluated to determine their eligibility for listing on the CRHR. The process for considering cultural resources on CEQA projects is essentially linear, although in practice it may overlap or be compressed. Evaluating prehistoric properties involves four basic tasks: (1) development of an archaeological research design (2) field excavations, (3) laboratory analysis, and (4) report preparation and eligibility determination.

MM 4.6-2 Unanticipated discovery of cultural resources. If previously unidentified cultural resources are encountered during project implementation, avoid altering the materials and their stratigraphic context. A qualified professional archaeologist should be contacted to evaluate the situation. Project personnel should not collect cultural resources. Prehistoric resources include, but are not limited to, chert or obsidian flakes, projectile points, mortars, pestles, and dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials. Historic resources include stone or abode foundations or walls; structures and remains with square nails; and refuse deposits or bottle dumps, often located in old wells or privies.

MM 4.6-3 Unanticipated discovery of human remains. Although unlikely, if human remains are encountered, all work must stop in the immediate vicinity of the discovered remains and the County Coroner and a qualified archaeologist must be notified immediately so that an evaluation can be performed. If the remains are deemed to be Native American and prehistoric, the Native American Heritage Commission must be contacted by the Coroner so that a "Most Likely Descendant" can be designated and further recommendations regarding treatment of the remains is provided.

4.6.7 Level of Significance after Mitigation

Mitigation measures for impacts to historical and archaeological resources (Impact 4.6.5.1) include avoidance of ALTA_PRE-01 or formal evaluation of this resource to determine eligibility for listing on the CRHR and evaluation of previously unidentified cultural resources encountered during the project by a qualified professional archaeologist. Impacts to historical and archaeological resources will be less than significant with implementation of Mitigation Measures 4.6-1 and 4.6-2.

Impacts related to the disturbance of human remains (Impact 4.6.5.2) will be less than significant with implementation of Mitigation Measure 4.6-3.

Implementation of Mitigation Measures 4.6-1 through 4.6-2 will ensure impacts to tribal cultural resources (Impact 4.6.5.3) are less than significant.

4.7 Energy

Expansion of the mining boundary of the current mining operation to include an additional 51 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 Section 15162.

This chapter 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.

4.7.1 Environmental Setting

Energy consumed by the current mining operation at the Project site includes diesel fuel and electricity. Diesel fuel is used to operate mobile equipment at the current mining operation as well as generators used to run the crushing plant, portable plant, and wash plant. Electricity is used to power the asphalt 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 horse power) 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).

4.7.2 Regulatory Setting - State

Public Resources Code Section 21100(b)(3) and State 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 Public Resources Code Section 21100(b)(3) to require EIRs to consider the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F of the State CEQA Guidelines. State CEQA Guidelines Appendix F is an advisory document that assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy.

California's Energy Efficiency Standards for Residential and Non-Residential Buildings (Title 24)

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, 2017, the 2016 Title 24 standards became effective with more stringent requirements. The 2016 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 2016 and went into effect January 1, 2017.

Recent CEQA Litigation

In California, Clean Energy Committee v. City of Woodland (2014) 225 Cal.App.4th 173 ("CCEC"), the Court observed that state CEQA Guidelines Appendix F lists environmental

impacts and mitigation measures that an EIR may include. Potential impacts requiring EIR discussion include:

- The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed.
- The effects of the project on local and regional energy supplies and on requirements for additional capacity.
- The effects of the project on peak and base period demands for electricity and other forms of energy.
- The degree to which the project complies with existing energy standards.
- The effects of the project on energy resources.
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives

4.7.3 Previous CEQA Review – 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

The standards of significance for the analysis of energy impacts is based on energy questions in Appendix G and Appendix F (Energy Conservation) of the 2021 CEQA Guidelines. According to Appendix G of the CEQA Guidelines, the Project would have a significant impact related to energy if it would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation
- Conflict or obstruct a state or local plan for renewable energy or energy standards

Appendix F requires consideration of the following within the analysis:

1. The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance and/or removal. If appropriate, the energy intensiveness of materials may be discussed.
2. The effects of the project on local and regional energy supplies and on requirements for additional capacity.
3. The effects of the project on peak and base period demands for electricity and other forms of energy.
4. The degree to which the project complies with existing energy standards.
5. The effects of the project on energy resources.
6. The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

4.7.5 Impact Analysis

The increase in annual production of the mine (from 10,000 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 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 of the Project will cease.

The 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 Project will require an additional 6,035 gallons of diesel fuel each year (RCH Group, 2021).

The Project will not result in an increase in material haul truck trips, therefore the transportation energy requirements of the Project will not increase. 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.

The impacts related to the energy use of the Project are discussed below.

Impact 4.7.5.1 Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation

The Project will increase the annual energy requirements for mining operations and extend the energy needs of the Project for an additional 20 years. The increase in energy will be proportionate to the increased volume of material produced from the mine. Following reclamation of the site after mining ends in 2050, the Project will no longer require fuel or electricity. The electricity and fuel demands of the Project will not exceed local or regional supplies during the operational period of the Project.

The Project does not include an increase in traffic generated by the operation. Transportation alternatives are not available for material haul trucks. The Project will supply construction projects requiring materials that would occur with or without the Project. The facility tends to shorten trips and reduce vehicle miles traveled and fuel use by providing a construction material source in the region serving local projects. Therefore, the Project results in an overall decrease in energy use to transport materials to local construction projects.

Hat Creek Construction & Materials, Inc., will be making improvements to the mixes of asphalt to be more energy and resource efficient, such as using RAP in mixes. This Project does recycle concrete and asphalt and uses the recycled materials in with the new asphalt materials.

The energy use of the Project will not be considered inefficient, wasteful, or unnecessary. This impact will be less than significant.

Impact 4.7.5.2 Conflict or obstruct a state or local plan for renewable energy or energy standards

This Project will not conflict or obstruct a state and local plan for renewable energy resources or energy standards. No impact.

4.7.6 Mitigation Measures

No mitigation measures are required.

4.7.7 Level of Significance after Mitigation

Impacts related to wasteful, inefficient, or unnecessary consumption of energy resources (Impact 4.7.5.1) will be less than significant. The Project will have no impact related to conflict or obstruction of a state or local plan for renewable energy or energy standards (Impact 4.7.5.2).

4.8 Geology and Soils

Expansion of the mining boundary to include an additional 51 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 Section 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 Project, and includes a discussion of the geology and soil impacts of the Project. Some of the information in this section was obtained from the *Preliminary Geotechnical Report Ward Lake Quarry Expansion* (Geotechnical Report) prepared for the expansion area by Bajada in October of 2020. The Geotechnical Report is included as Appendix B.

4.8.1 Environmental Setting

4.8.1.1 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 4500 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.

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). A more detailed geologic description is included in the Geotechnical Report prepared by BAJADA Geosciences, Inc., included as Appendix B. Surface geology was shown on Figure 3-6. Soils were shown on Figure 3-7.

As described in the Geotechnical Report, volcanic rock within the expansion area was observed to consist of basalt, andesite, and lessor amounts of rhyolite. The basalt was observed within the existing quarry to be weak to hard (International Society of Rock Mechanics [ISRM] Grade R2 to R4), highly to slightly weathered (ISRM Grade II to IV), 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 (ISRM Garde R1 to R2, completely to moderately weathered (ISRM Grade III to V), and were largely soil-like with cobble to boulder size spheroidally shaped clasts of weak (ISRM Grade R2) andesite incorporated into the soil matrix. Thus, the andesite and rhyolite are considered block-inmatrix, or bimrock, layers. The volcanic rock materials were not fully penetrated by explorations shown on Plate 4 and are thought to extend deeper than the anticipated quarry excavations.

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 area (Bajada, 2020).

4.8.1.2 Seismicity

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 project north through the quarry area and region 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

4.8.2.1 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.

4.8.2.2 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.

4.8.2.3 Local

Lassen County General Plan

The Safety and Seismic Safety Element of Lassen County's General Plan was adopted in 1974 and states the following:

> *Lassen County is located in an area designated by the California Division of Mines and Geology as Seismic Zone ID (DMG, 1973). Zone III areas are subject to major damage corresponding to intensities of VIII to X on the Modified Mercalli Scale.*
>
> *The Fault Evaluation Program of the California Department of Conservation, Division of Mines and Geology (DMG), is a long-term program designed to identify active faults that may be hazardous, in terms of surface fault-rupture, to structures built astride such faults. This program was designed to carry out objectives of the Alquist-Priolo Special Studies Zones (APSSZ) Act of 1972 (DMG, 1991).*
>
> *The APSSZ Act requires the State Geologist to identify active faults and to issue maps of Special Studies Zones in order to regulate development "projects" near active faults. The purpose of the Act is to reduce the hazard of surface faulting to structures for human occupancy. Cities and counties affected by the regulatory zones must regulate specified projects within the zones in order to locate structures for human occupancy away from the traces of active faults.*
>
> *Under the program, the State Geologist is responsible for delineating regulatory zones, known as Special Studies Zones, that encompass hazardous faults. The zones are delineated on topographic base maps at a scale of one inch equals 2000 feet (1:24,000). Cities and counties affected by the zones must regulate certain types of development where structures for human occupancy are proposed. Regulation is accomplished by requiring geologic investigations of individual sites in order to avoid siting proposed structures astride active faults.*

The State Mining and Geology Board establishes specific policies and criteria to guide local jurisdictions in implementing seismic safety law (California Administrative Code, Title 14, Division 2, Chapter 8, Subchapter 1, Article 3).

The Lassen County General Plan contains the following goals, policies, and implementation measures for geologic and soil resources and geologic hazard areas:

- Goal N-2: To protect and maximize the present and future productive, economic and environmental values of the County's soil resources.
- NR-8 Policy: The County recognizes the need to protect and conserve areas where soils have high resource values, especially in terms of potential agricultural productivity.
- NR-9 Policy: 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.
    - Implementation Measure NR-D: Pursuant to the California Environmental Quality Act, the County shall consider the impacts of proposed projects on areas having soils of locally significant agricultural value, whether currently used or not, and shall consider necessary and appropriate mitigation measures to avoid, reduce, or compensate for the extent of significant disturbance to those soils.
    - Implementation Measure NR-E: The County will consider the productive value of soil resources as a factor in adopting land use designations and zoning.
    - Implementation Measure NR-F: The County will form a task force made up of representatives of qualified agencies and organizations to clarify the local definition of "prime" and other important agricultural lands and shall use such information to implement its General Plan policies and make related land use decisions.
- NR10 POLICY: 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.
    - Implementation Measure: NR-G The County may adopt a grading ordinance to establish standards and permitting processes in addition to enforcement of the Excavation and Grading provisions of the Uniform Building Code to regulate grading projects which could cause or aggravate conditions for soil erosion related to development projects.
- NR11 POLICY: The County encourages State and Federal programs and projects designed to reduce soil erosion and to repair areas damaged by erosion.
- NR 12 POLICY: 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.

- OS19 POLICY: 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.

    - Implementation Measure OS-I: The County will continue to work with the California Department of Mines and Geology and other. agencies in identifying and mapping areas which have significant geologic hazards, and in recommending special development restrictions to assist in the protection of the public from such hazards.
    - Implementation Measure: OS-J: The Lassen County Department of Community Development shall review proposed projects with respect to location in or near areas having documented significant geologic hazards.

An index map of the 14 official Alquist-Priolo Earthquake Fault Zone maps that cover Lassen County has also been prepared by the DMG. The maps are available from the Division of Mines and Geology in Sacramento. Information regarding geologic hazards may also be viewed at the Department of Conservation's website (currently www.consrv.ca.gov).

4.8.3 Previous CEQA Review

4.8.3.1 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. Reclamation plans as discussed under "Mitigation Measures" will be implemented to reduce changes to an acceptable level. Mitigation measures proposed 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 reseeding 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.

4.8.3.2 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 in place related to reclamation practices in the "Vegetation and Wildlife" section are expected to mitigate these cumulative and project impacts to make them less than significant. (Summary Table 3-10 of the EIR). It is also stated on Page 4-3 of the 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 Vegetation and Wildlife chapter of 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.

4.8.3.3 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 within the study area of Geology.

4.8.4 Thresholds of Significance

Based on Appendix G of the 2021 CEQA Guidelines, a Proposed Project could have an impact on the environment related to geology, and soils if the Project would:

- Expose people or structures to potential substantial adverse effects, including risk of loss, injury, or death involving:
    - v) 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.
    - vi) Strong seismic ground shaking.
    - vii) Seismic-related ground failure, including liquefaction.
    - viii) 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 waste water disposal systems where sewers are not available for the disposal of waste water.
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

4.8.5 Impact Analysis

The 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 51-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 Geotechnical Report prepared for the expansion area.

The Geology and Soil impacts of the project are discussed below.

Impact 4.8.5.1 Expose people or structures to potential substantial adverse effects, including risk of loss, injury, or death involving:

v) 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.

The Geotechnical Report states that there could be a risk of fault rupture across the project site from the warm Valley Springs fault. 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 expansion area will be conducted in accordance with the recommendations included in the Geotechnical Report. This impact will be less than significant.

vi) Strong seismic ground shaking?

As referenced in the 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 project north through the quarry area and region 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 (see Table 4-16 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 4-16. The quarry is 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 4-16
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

vii) 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 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 exploratory on site. Terrace deposits are considered to have a low potential for liquefaction susceptibility and the impacts would be less than significant.

viii) 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. The Geotechnical Report states that the chances of a landslide are very low and no existing, past or incipient landslides were observed within the proposed quarry expansion area.

The Geotechnical Report prepared for the expansion area includes maximum recommend slope inclinations, slope heights, as well as bench recommendations for the expansion area. As discussed in the reclamation plan, The final slope of the proposed expansion area will be 1:1 (H:V) per the Geotechnical Report. 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, as recommended in the Geotechnical Report, 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. Mining at the project site will be conducted per the recommendations included in the Geotechnical Report, which will minimize the risk of landslides on cut faces. Landslide risk at the project site will be less than significant.

Impact 4.8.5.2 Result in substantial soil erosion or the loss of topsoil?

The 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 project 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 4.8.5.3 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 C of the Geotechnical Report). Thus, terrace deposits are considered to have a low potential for liquefaction susceptibility or lateral spreading and a less than significant impact.

Impact 4.8.5.4 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 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.

Impact 4.8.5.5 Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

The proposed expansion does not include the use of any septic tanks or alternative waste water disposal systems. There would be no impact related to adequately supporting these systems.

Impact 4.8.5.6 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The project would result in a significant impact to paleontological resource is 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 expansion area. However, there is a chance that currently unknown paleontological resources may exist below the ground surface and could be encountered during mining and reclamation activities at the project site. The project would result in a significant impact if paleontological resources are directly or indirectly destroyed during activities at the project site.

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 project proponent shall be required to implement mitigation necessary for the protection of paleontological resources. The County and Hat Creek Construction shall consider the mitigation recommendations of the qualified paleontologist for unanticipated discoveries. The County and Hat Creek Construction shall consult and agree upon implementation of a measure or measures that the County and Hat Creek Construction deem feasible and appropriate. 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

Impact 4.8.5.1 (i-iv) will be less than significant. Impacts related to soil erosion and loss of topsoil (Impact 4.8.5.2) and impacts related to geologic stability (Impact 4.8.5.3) will be less than significant. The project will have no impact related to expansive soils (Impact 4.8.5.4). The project does not include installation of a septic tank or alternative waste water disposal system; therefore, Impact 4.8.5.5 will cause no impact. Impacts to paleontological resources (Impact 4.8.5.6) will be less than significant with implementation of mitigation measure MM 4.8-1, which will avoid and minimize impacts should any paleontological resources be discovered during mining or reclamation.

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 Section 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 Project, and includes a discussion of the GHG impacts of the Project. 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 January 27, 2021 (Air Quality Analysis). The Air Quality Analysis is included as Appendix F.

4.9.1 Environmental Setting

The following background information pertaining to GHGs and regional GHG estimates were obtained directly from the Air Quality Analysis prepared for the Project.

4.9.1.1 Background Information on Greenhouse Gas (GHG)

"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 (CO_2), methane (CH_4), and nitrous oxide (N_2O), ozone, and water vapor.

While the presence of the primary GHG in the atmosphere are naturally occurring, CO2, CH_4, and N_2O are also emitted from human activities, accelerating the rate at which these compounds occur within earth's atmosphere. Emissions of CO_2 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.

CO_2 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 N_2O are substantially more potent GHG than CO_2, with GWP of 28 and 265 times that of CO_2, respectively (IPCC 2014).

In emissions inventories, GHG emissions are typically reported in terms of pounds or metric tons (MT) of CO_2 equivalents (CO_2e). CO_2e are calculated as the product of the mass emitted of a given GHG and its specific GWP. While CH_4 and N_2O have much higher GWP than CO2, CO_2 is emitted in such vastly higher quantities that it accounts for the majority of GHG emissions in CO_2e.

Fossil fuel combustion, especially for the generation of electricity and powering of motor vehicles, has led to substantial increases in CO_2 emissions (and thus substantial increases in

atmospheric concentrations of CO_2). In pre-industrial times (c. 1860), concentrations of atmospheric CO_2 were approximately 280 parts per million (ppm). By November 2020, atmospheric CO_2 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 snow pack, 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)

4.9.1.2 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 CO_2. 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 greater 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 CO_2e higher than 2017 levels and six million metric tons of CO_2e below the 2020 GHG limit of 431 million metric tons of CO_2e (CARB 2020) Consistent with recent years, these reductions have occurred while California's economy has continue 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).

4.9.1.3 Existing GHG Emissions

Equipment currently used at the Project site 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 4-17 under the impact analysis below.

4.9.2 Regulatory Setting

The following regulatory setting information was obtained from the Greenhouse Gas Analysis section of the Air Quality Analysis prepared for the Project.

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 CO_2e, six million metric tons of CO_2e below the 2020 GHG limit of 431 million metric tons of CO_2e and two million metric tons of CO_2e below the 1990 GHG limit of 427 million metric tons of CO_2e. 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.

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). On May 22, 2014, the First Update to the Climate Change Scoping Plan was approved by CARB.

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 Review

The environmental documents prepared in 1981 and 1997 for operations at the Project site 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 thresholds from the Bay Area GHG Management District, 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 project would have a less-than-significant impact to GHG emissions, directly or indirectly, on the environment. The analysis in the 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

Per Appendix G of the 2021 CEQA Guidelines, greenhouse gas-related impacts are considered significant if implementation of the proposed Project under consideration would:

- 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 nor the County itself has adopted numerical thresholds of significance for GHG emissions that would apply to the proposed Project. 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 CO_2e 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 CO2e 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 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 51 acres of mining area. They typical and maximum daily operations are not expected to change as a result of the Project. 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 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 CO2e per year and, in so doing, has determined that this value is consistent with applicable regulations and programs.

Impact 4.9.5.1 Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment

The Air Quality Analysis prepared by RCH Group 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 4-17. The estimated annual incremental GHG emissions of the Project would be approximately 61 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 4-17
ANNUAL GREENHOUSE GAS EMISSIONS (METRIC TONS)

Emission Source	Existing Condition	Proposed Project	Project Increment
Onsite Equipment	94	155	61
Generator -Crushing Plant	1,456	1,456	-
Generator -Portable Plant	914	914	-
Generator -Wash Plant	903	903	-
Haul Trucks	546	546	-
Total	**3,913**	**3,974**	**61**
Significance Threshold			10,000
Exceeds Threshold?			No

Source: RCH Group, 2021

Impact 4.9.5.2 Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases

Neither Lassen County Air Pollution Control District nor Lassen County has a currently adopted region-specific plan for reducing GHG emissions. As discussed under Impact 4.9.5.1 above, GHG emissions generated by the 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 Project would not conflict with any applicable plans, polices, or regulations adopted for the purpose of reducing the emissions of greenhouse gases. This impact would be less than significant.

4.9.6 Mitigation Measures

No mitigation measures are required.

4.9.7 Level of Significance after Mitigation

Project impacts (Impact 4.9.5.1 and 4.9.5.2) will 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 51 acres will result in minor changes related to Hazards and Hazardous Materials. The Project 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 at the Project site for current mining operations, and includes a discussion of impacts to hazards and hazardous materials of the 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.

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.

4.10.2.1 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 (RCRA)

The 1976 Federal Resource Conservation and Recovery Act 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 (CERCLA – Superfund)

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. It is designed to plan for and respond to failure in other regulatory programs and to remedy problems resulting from action taken before the era of comprehensive regulatory protection (Shasta County, 2017).

4.10.2.2 State

The primary state agencies that are responsible for overseeing regulations and policies regarding hazardous materials are the California Office of Emergency Services (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 (Shasta County, 2017).

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 California Highway Patrol (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.

The California Office of Emergency Services (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 Regional Water Quality Control Boards (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 (CUPA)

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.

4.10.3 Previous CEQA Review

4.10.3.1 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.

4.10.3.2 1997 EIR

Hazardous materials are discussed in the Hydrology/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 EIR determined project impacts related to hazardous waste/water quality were significant due to an inadequate Spill Prevention and Countermeasure Plan (SPCC Plan). The following mitigation measure relating to hazardous materials was included in the 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

4.10.3.3 2019 EIR

Hazards and hazardous material impacts of the expansion of the operation to 24 hours was discussed in the 2019 EIR. The project 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

Significant hazards and hazardous materials impacts that could occur were determined from the 2021 CEQA Guidelines. These guidelines provide guidance in hazards and hazardous materials impacts. Based on this guidance, a project may be deemed to have a significant impact related to hazards and hazardous materials if it will:

- 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 environmental 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 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. The expansion area is not located on a site included on a list of hazardous materials sites. The Project is not in the vicinity of an airport and will not expose workers to safety hazards or excessive noise from airports. The Project will not impact implementation of an adopted emergency response plan or emergency evacuation plan.

The Project will include the use of hazardous materials such as fuels, lubricants and explosives in the 51-acre expansion area. A discussion of these impacts is included below.

Impact 4.10.5.1 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

The Project will result in the use of hazardous materials used for the existing mining operation in the 51-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.

Activities that will occur in the expansion area include material extraction and use of a portable crusher. Blasting will also occur. The 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 Environmental Health 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. Impacts will be less than significant.

Impact 4.10.5.2 Expose people or structures to a significant risk of loss, injury or death involving wildland fires

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. The Project will not expose people or structures to a significant risk or loss, injury or death involving wildland fires. This impact will be less than significant.

4.10.6 Mitigation Measures

No mitigation measures are required.

4.10.7 Level of Significance after Mitigation

The Hazard and Hazardous Materials impacts (4.10.5.1 and 4.10.5.2) will be less than significant.

4.11 Hydrology and Water Quality

Expansion of the mining boundary to include an additional 51 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 Section 15162.

This section provides a description of the existing Hydrology and Water Quality setting of the Project site and surrounding area, summarizes the previous CEQA review of hydrology and water quality impacts at the Project site, and contains an analysis of the Hydrology and Water Quality impacts of the Project.

4.11.1 Environmental Setting

There are no existing streams or bodies of water within the boundaries of the proposed expansion area or current mining area. The 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. Hydrology is shown on Figure 3-5.

The Project site 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. Concentrated 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 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, California's *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.

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.

Well water 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.

4.11.2 Regulatory Setting

4.11.2.1 Federal

Clean Water Act (CWA)
The 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 project site, a proposed 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 (NPDES)
The 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 (Shasta County, 2017).

4.11.2.2 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 (Shasta County, 2017).

4.11.2.3 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.
    - Implementation 5.1: If it appears that the quality of groundwater could deteriorate, development immediately adjacent to any water courses or body of water should be designed to ensure the water quality is not adversely affected by soil erosion, by direct discharge of potentially harmful substances, by ground leaching from storage of raw materials, or by runoff from the sites.
    - Implementation 5.3: The County Sanitarian should regularly monitor groundwater quality in the Planning Area and take appropriate measures to prevent health hazards if it appears that the quality of groundwater could deteriorate.

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 Lassen County 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 Lassen County 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 Lassen County 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 Review

4.11.3.1 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.

4.11.3.2 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.

4.11.3.3 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 Spill Prevention and Countermeasure 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 at the project site was not necessary and an analysis was not included in the 2019 EIR.

4.11.4 Thresholds of Significance

Significant impacts that could occur were determined from the 2021 CEQA Guidelines. These guidelines provide guidance in defining significant hydrology and water quality impacts. Based

on this guidance, the project may be deemed to have a significant impact on hydrology and water quality if it will:

- 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 Project will alter the existing drainage pattern of the Project site as mining and reclamation activities occur within the current mining boundary and the 51-acre expansion area. The Project site does not contain any streams or rivers. The Project does not include any change to the sediment ponds or onsite structures of the existing mining operation. The Project could result in a slight change in groundwater use for dust suppression.

The Hydrology and Water Quality impacts of the Project are discussed below.

Impact 4.11.5.1 Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.

The Project does not include additional pollutant sources or changes to the management of stormwater or wash water at the Project site. 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 Spill Prevention, Control, and Countermeasure (SPCC) Plan in double-walled containers

The current mining operation at the Project site retains all surface flow (stormwater) onsite. Stormwater from the expansion area will be conveyed to the existing retention ponds at the

Project site 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 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 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 be secured and Spill Prevention and Countermeasure Plan for fuel storage be approved by the RWQCB.

Project impacts to surface and groundwater quality will be less than significant.

Impact 4.11.5.2 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 Project could increase the groundwater use for dust suppression at the Project site since the acreage of the mining area will increase by 51 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 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.

The Project will not substantially decrease groundwater supplies or interfere substantially with groundwater recharge. Impacts to groundwater supplies will be less than significant.

Impact 4.11.5.3 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:

v) result in substantial erosion or siltation on- or off-site;

The Project site does not include alteration of the course of a stream or river or include addition of impervious surfaces at the Project site. The Project 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. Less-than-significant impact.

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

See response to i) above. Stormwater 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. The Project will not result in flooding on-or-offsite. This impact will be less than significant.

vii) 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;

The expansion area is 51 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. Less-than-significant impact.

viii) impede or redirect flood flows

There are no rivers or streams within the Project site. The Project is not located within a floodplain. The Project will not impede or redirect flood flows. No impact.

Impact 4.11.5.4 Result in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation

The Project site is not located within a flood hazard zone, tsunami, or seiche zone. The Project site will not be inundated by water from flooding, tsunami or seiche. There is no risk of release of pollutants due to Project inundation. No impact.

Impact 4.11.5.5 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 Groundwater Management Plan 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 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 Project will not conflict with or obstruct the Water Quality Control Plan for the Lahontan Region. This impact will be less than significant.

4.11.6 Mitigation Measures

No mitigation measures are required.

4.11.7 Level of Significance after Mitigation

Impacts to surface and groundwater quality (Impact 4.11.5.1) and groundwater supplies and recharge (Impact 4.11.5.2) will be less than significant. Impacts related to erosion and siltation (Impact 4.11.5.3(i)), flooding (Impact 4.11.5.3 (ii)), and stormwater drainage systems/polluted runoff (Impact 4.11.5.3(iii)) will be less than significant. The Project will have no impact to flood flows (Impact 4.11.5.3(iv)) or to the release of pollutants due to Project inundation (Impact 4.11.5.4). The Project will not conflict with or obstruct a Water Quality Control Plan or Groundwater Management Plan; therefore, Impact 4.11.5.5 will 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 Section 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 Project. This section also includes Project-related impacts and recommended mitigation measures.

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.)

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 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 proposed 51-acre expansion area is zoned U-C-A-P (Upland Conservation District Agricultural Preserve Combining District). Lands immediately adjacent to the Project area are zoned Open Space District; Upland Conservation District; and 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 Project site and adjoining properties are provided in Table 4-18.

Table 4-18
ZONING AND LAND USE OF PROJECT SITE AND ADJOINING PROPERTIES

Area Location Relative to Site	Zoning	Land Use Designation (Lassen County General Plan)
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

4.12.2 Regulatory Setting

4.12.2.1 2000 Lassen County General Plan

The 2000 Lassen County General Plan was adopted in September 1999. The 2000 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 2000 Lassen County 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

4.12.2.2 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 Project.

4.12.3 Previous CEQA Review

4.12.3.1 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).

4.12.3.2 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 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 1986 Standish-Litchfield Area Plan (the 1986 Standish-Litchfield 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.

4.12.3.3 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 EIR.

Goal L-22 contained in the Lassen County 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 was found not to conflict with Goal L-22 of the Lassen County General Plan Land Use Element. Project 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

Significant impacts that could occur were determined from the 2021 CEQA Guidelines. These guidelines provide guidance in defining significant land use and planning impacts. Based on this

guidance, the Project may be deemed to have a significant impact on land use and planning if it will:

- 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 Project includes expansion of the existing mining operation by an additional 51 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 Project will not physically divide an established community. The Project will have no impact related to physically dividing 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 the Noise section of this DSEIR.

Impact 4.12.5.1 Conflict with Lassen County General Plan or Standish-Litchfield Area Plan

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 Project does not include additional traffic or a change in the distribution of traffic from the current operation. The Project will not conflict with local traffic or circulation policies.

The following goals, policies, and implementation measures related to land use contained in the Lassen County General Plan and Standish-Litchfield Area Plan are applicable to the Project:

Lassen County General Plan Land Use Element

- 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.
- LU-6 Policy: The County recognizes general plan land use designations and consistent zoning as the appropriate and primary tools for attempting to achieve
- LU-7 POLICY: 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.

  - Implementation Measure LU-F: The County shall continue to utilize the California Environmental Quality Act (CEQA) process, when applicable, to evaluate the potential impacts of proposed changes in land uses on surrounding lands and to implement appropriate mitigation measures when needed.

- GOAL L-13: Improvement, expansion and diversification of the County's industrial base and generation of related employment opportunities.

- LU32 POLICY: The County encourages and will facilitate the development of new, environmentally responsible industrial projects for the economic benefit of the County.

- LU33 POLICY: 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 2-13 Lassen County General Plan Land Use Element the protection of natural resources as addressed in relevant sections of the General Plan.

  - Implementation Measure LU-S: The County shall continue to utilize the CEQA process, when applicable, to evaluate the potential impacts and land use issues related to proposed industrial development, and shall require appropriate mitigation measures when needed.

- LU34 POLICY: 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.

- LU35 POLICY: 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) saw mills 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.

- GOAL L-16: Conservation of productive agricultural lands and lands having substantial physic.al 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.
- LU40 POLICY: 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.
    - Implementation Measure LU-X: Land designated "Intensive Agriculture" in the Land Use Element shall be zoned "E-A" Exclusive Agriculture District, "A-3" Agricultural District, "U-C" Upland Conservation District, or "U-C-2" Upland Conservation/Resource Management District.
    - Implementation Measure LU-Y Land designated "Extensive Agriculture" in the Land Use Element shall be zoned "U-C", Upland Conservation District, "U-C-2", Upland Conservation/Resource Management District or "A-3", Agricultural District.
- Goal L-22: Protection and enhancement of important wildlife habitats to support healthy, abundant and diverse wildlife populations.
- LU-49 Policy: 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 physic.al 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.
- LU40 POLICY: 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.
    - Implementation Measure LU-X: Land designated "Intensive Agriculture" in the Land Use Element shall be zoned "E-A" Exclusive Agriculture District, "A-3" Agricultural District, "U-C" Upland Conservation District, or "U-C-2" Upland Conservation/Resource Management District.
    - Implementation Measure LU-Y: Land designated "Extensive Agriculture" in the Land Use Element shall be zoned "U-C", Upland Conservation District, "U-C-2", Upland Conservation/Resource Management District, or "A-3", Agricultural District.

Standish-Litchfield Area Plan

- Policy 16-A: Industrial land use activities shall be confined to mineral extraction, agricultural processing activities or to industrial activities incidental to the mixed use residential/commercial designation for the Town Centers of Standish and Litchfield. Other forms of industrial uses should be located closer to the larger population centers of Susanville and Johnstonville at sites where there is existing infrastructure to serve them.
    - Implementation 16.1: Development adjacent to mineral extraction or agricultural processing operations should be regulated so that proposed future land uses will not be incompatible.
    - Implementation 16.2: All proposed mining or mineral extraction applications shall be accomplished by a reclamation plan directed towards the rehabilitation, reuse, erosion control, and water quality protection of mineral resource lands.
    - Implementation 16.3: Upon classification by the State Geologist of any land area within the planning area as MRZ-2 zone, pursuant to the Surface Mining and Reclamation Act, the County shall protect such areas from development incompatible with mining.
    - Implementation 16.4: Land uses for mineral extraction should be designated as "Extensive Agriculture" and zoned "U-C", Upland Conservation

The Project does not include any changes in land use designation of the Project site. The Project site land use designation is Extensive Agriculture. 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 #2018-003. The Project includes an Amendment to the Use Permit to include the 51-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. The proposed expansion area is currently zoned Upland Conservation District/Agricultural Preserve Combining District. Upland Conservation District (U-C) 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 wild fire, 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 Project includes an Amendment to the Use Permit to include the 51-acre expansion area, increase in processing volume, and extension of the life of the mine. The 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 the Biological Resources section 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 Project will result in impacts to wildlife habitat. The impacts of the Project to pronghorn and mule deer and special-status species are discussed in the Biological Resources section of the DSEIR. This impact will be significant without mitigation. With implementation of the Biological Resource Mitigation Measures, the Project will not conflict with Goal L-22 of the Lassen County General Plan Land Use Element.

4.12.6 Mitigation Measures

The following mitigation measures (MM) from the Biological Resources section of the DSEIR are proposed for the significant Project impacts:

MM 4.12-1 **Preservation of remaining habitat onsite.** This option would preserve the remaining habitat onsite and involve no additional mining beyond the additional planned 51 acres. Applicant would consent to setting land aside from future development. Most of the surrounding parcels are zoned for development for agricultural or natural resource extraction purposes, so setting undeveloped land aside would ensure undisturbed wildlife habitat.

MM 4.12-2 **Partial avoidance.** This option would involve locating the proposed Project work in the least environmentally sensitive area in order to avoid disturbance of the rare plant community. Protocol-level surveys will be completed during an appropriate time of year, when the plant is in flowering stage. The area identified as environmentally sensitive would be protected by a buffer zone.

MM 4.12-3 **Offsite acquisition of sensitive plant communities.** This option would involve compensating for any loss of sensitive/rare plant communities. This can be achieved through the permanent protection of an offsite native population, permanent protection of an offsite introduced population, or creation and protection of an onsite population. The former is preferred as the success rate of onsite introduction of rare plants is low due to the little knowledge about their specific habitat requirements.

MM 4.12-4 **Habitat enhancement.** This option would involve enhancing habitat on the Project parcel or nearby parcels to provide additional cover and foraging opportunities for wildlife species.

MM 4.12-5 **Bird nest avoidance.** Vegetation will be removed outside of bird nesting season (February through August), to the extent possible, to avoid impacts to shrub-nesting birds.

MM 4.12-6 **Limits on operation.** The operator shall continue limits on operations from January 1 to March 31. 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 1 and March 31 Annually.

MM 4.12.-7 **Operating conditions of Use Permit #2018-003.** The operator shall continue the Conditions of Approval for Use Permit Amendment #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.

4.12.7 Level of Significance after Mitigation

Implementation of the above mitigation measures will ensure that the Project will not conflict with the land use policies contained in Lassen County General Plan or Standish-Litchfield Area Plan. Following implementation of the above mitigation measures, the Project will have a less-than-significant Land Use impact. As mentioned above, perfect project conformity is not required under CEQA (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.) (San Francisco Tomorrow v. City and County of San Francisco (2014) 229 Cal.App.4th 498 [176 Cal.Rptr.3d 430].) (Pfeiffer v. City of Sunnyvale City Council (2011) 200 Cal.App.4th 1552 [135 Cal.Rptr.3d 380].)

With the implementation of the mitigation measures above, the Project is substantially consistent with the General Plan and the Standish-Litchfield Area Plan.

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 in the Project that will require major revisions of the previous EIR due to the involvement of potentially new significant environmental effects pertaining to Noise Resources which could lead to a substantial increase in the severity of previously identified significant effects under CEQA Guidelines Section 15162.

This section provides a description of existing noise in the Project area, summarizes the previous CEQA analyses of the noise impacts of the current operation at the Project site, and describes the changes to those conditions that will result from the Project. This section also includes Project-related impacts. 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. (Noise Analysis) for the facility expansion that occurred in 2019. The Noise Analysis is included as Appendix H of the 2019 EIR.

4.13.1 Environmental Setting

The following background information on noise vibration is taken directly from the Noise Analysis.

4.13.1.1 Background Information on 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 4-19 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 4-19 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, Technical Noise Supplement, Traffic Noise Analysis Protocol. November 2013		

4.13.1.2 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.). 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.

4.13.1.3 Vibration Background

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

4.13.1.4 Existing Ambient Noise Levels

The Project site includes the existing quarry as well as 51 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.

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. 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 3 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 (this includes mobile equipment associated with the operations);
- Cement and Asphalt Batch Plants;
- 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 4th, 2018.

Noise measurement locations are shown on Figure 4-6. A summary of the noise level measurement survey results are provided in Table 4-20. Appendix B of the Noise Analysis (included in the 2019 EIR) contains the complete results of the continuous (24-hour) noise monitoring.

Table 4-20
EXISTING CONTINUOUS BACKGROUND NOISE MEASUREMENT DATA SUMMARY
MAY 3-4, 2018

Site	Ldn (dBA)	Average Measured Hourly Noise Levels (dBA)					
		Daytime (7am-10pm)			Nighttime (10pm-7am)		
		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

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.

4.13.1.5 Existing Hat Creek Materials Facility Plant Operations 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 or the overall operations. The results of the individual operations noise measurements are provided in Table 3 of the Noise Analysis (Appendix H of the 2019 EIR).

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.

4.13.1.6 Existing Traffic Noise Levels

Traffic noise levels for the current mining operation were estimated in the Noise Analysis completed for the 2019 EIR. 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 4-21.

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 #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.

Table 4-21 PREDICTED TRAFFIC NOISE LEVELS DURING AN AVERAGE DAY				
		Traffic Noise	Distance to Noise Contours	
Roadway	Location	Level @ 75'*	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. and FHWA RD-77-108 *- Roadway noise levels are calculated from the roadway centerline				

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 4-22.

Table 4-22 PREDICTED TRAFFIC NOISE LEVELS 550 TRUCK TRIPS PER DAY				
		Traffic Noise	Distance to Noise Contours	
Roadway	Location	Level @ 75'*	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. and FHWA RD-77-108 *- Roadway noise levels are calculated from the roadway centerline				

4.13.1.7 Materials Facility Onsite Operations Noise Levels at the Nearest Residences

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 and 2019 Noise Analysis 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.

4.13.1.8 Overall Measured Background Noise Levels

Background noise levels contained in the 2019 EIR and Noise Analysis 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.

4.13.2 Regulatory Setting

Lassen County's General Plan Noise Element includes noise level policies for land use compatibility. The following summarizes the 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.

Objectives: The general objectives of the Lassen County Noise Element are to:

1. Develop and adopt specific policies and an effective implementation program to abate and avoid excessive noise exposures in the county by requiring that effective noise mitigation measures be incorporated into the design of new noise-generating and new noise-sensitive land uses.
2. Provide sufficient noise exposure information so that existing and potential noise impacts may be effectively addressed in the land use planning and project review processes.

3. Protect areas within the county where the present noise environment is within acceptable limits.

Implementation:

Policy 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 4-23. These standards do not apply to residential units established in conjunction with industrial or commercial uses.

Policy 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 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 4-23 of this report.

Policy 8: Noise produced by industrial uses shall not exceed 70 dB Ldn at the nearest property line.

Table 4-23
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 (7am-10pm)	Nighttime pm to 7 am)
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

California Environmental Quality Act (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 4-24 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 4-24 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 dBA0	+1.5 dB or more
Source: FICON, August 1992	

Based upon the Table 4-24 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 4-24 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 is 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).

4.13.3 Previous CEQA Review

4.13.3.1 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.

4.13.3.2 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.*

4.13.3.3 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" sings will be posted by the operator on the access road and at the Cent 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 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 to noise after implementation of the above mitigation measure were significant and unavoidable.

4.13.4 Thresholds of Significance

Significant impacts that could occur were determined from 2021 CEQA Guidelines. These guidelines provide guidance in defining significant noise impacts. Based on this guidance, the project may be deemed to have a significant impact on noise if it will:

- 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 4-23.
- 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.

4.13.5 Impact Analysis

The Project will have no impact related to aircraft noise from public airports or private airstrips since the Project is not located near a public airport or private airstrip. The 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 potential for Project operations to result in noise impacts is expected to be due to operation of mining equipment in the 51 acre expansion area of the Project site. The potential noise impacts of the Project are discussed below.

Impact 4.13.5.1 Result in substantial temporary or permanent increase in ambient noise levels in excess of standards established in the Lassen County General Plan

d) Plant Operations

The Project does not include changes to plant operational noise levels analyzed in the 2019 EIR. The Project will not result in additional equipment in the plant area of the Project site or locate

plant equipment closer to sensitive receptors. The mine hours of operation are from 6:00 a.m. to 7:00 p.m., six days per week. Operations occur between the hours of 7:00 p.m. and 6:00 a.m. on an as-needed basis. During the extended hours of operations, the asphalt batch plant, cement batch plant and crushing operations occur. The sand plant does not operate during the extended hours of operations.

As discussed in the 2019 EIR, the nighttime noise levels of plant operations could exceed the Lassen County nighttime noise level criteria of 40 dBA L50, if generator start-up operations occur during the nighttime hours of 10:00 p.m. to 7:00 a.m., resulting in a potentially significant impact. A mitigation measure restricting generator start-up operations to between the hours of 7:00 a.m. to 10:00 p.m. was included in the 2019 EIR to reduce plant operation noise levels to a less than significant level and was required as Condition of Approval #4 for the Use Permit Amendment. This condition of approval will be implemented for the Project. Once operations occur, they are generally in the mid 30 dBA L50 range, meeting the County nighttime criteria of 40 dBA. In addition, some of the plant equipment at the Project site has been switched to electric power instead of using a generator. Plant operation noise levels of the proposed Project will not exceed standards established in the Lassen County General Plan. This impact will be less than significant.

e) 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 ¾ 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). 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 and will not exceed the L50, L25, L8 or L1.5 daytime noise standards for Lassen County at the nearest residence 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 #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. This location would be further from the residences than the location of the crusher currently onsite resulting in lower noise levels at the closest residences than noise produced by the crushing operations of the current operation. Condition of Approval #4 restricting generator start-up operations to between the hours of 7:00 a.m. to 10:00 p.m. was determined to reduce noise

levels from the current plant area including crushing operations to below Lassen County noise standards. This condition of approval will apply to the proposed Project as well. 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.

f) 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 4-22.

The 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, not by increasing truck volumes. The Project will continue to comply with Condition of Approval #8 of Use Permit Amendment #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). 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. The Project will not result in a significant increase in existing traffic noise levels. Noise levels up to 65 dB are conditionally acceptable and allowed by Use Permit Amendment #2018-003. The Project will have a less-than-significant impact related to traffic noise level increases.

Impact 4.13.5.2 Result in the generation of excessive groundborne vibration or groundborne noise levels

The Project 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 result in lower levels of vibration at the closest residence or structure compared to existing operations.

Blasting is not proposed at night during 24 hour operations. The operator will continue to comply with Condition of Approval #3 stating no grading, blasting, or excavating shall be allowed between the hours of 6:00 p.m. and 7:00 a.m. year-round. The Project will not result in an increase in truck traffic or associated levels of vibration. Project impacts related to groundborne vibration and ground born noise levels will be less than significant.

4.13.6 Mitigation Measures

No mitigation measures are required.

4.13.7 Level of Significance after Mitigation

Project impacts related to increases in ambient Noise levels in excess of Lassen County General Plan standards (Impact 4.13.5.1) were determined to be less than significant.

Project impacts related to groundborne vibration and groundborne Noise levels (Impact 4.13.5.2) will be less than significant.

4.14 Transportation and Traffic

Transportation and Traffic impacts of the current mining operation were analyzed in the 2019 EIR prepared for the current mining activities at the Project site. The Project does not include an increase in average or maximum traffic numbers allowed by the current use permit (Use Permit Amendment #2018-003) or change in traffic distribution. The additional proposed production will be met by optimizing truck loads instead of increasing truck trips.

Traffic volumes generated by the Project will not exceed traffic volumes analyzed in the Transportation and Traffic section of the previous EIR. The previous EIR 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 Section 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 are 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

4.14.1.1 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 as described in the traffic study prepared for the 2019 EIR (Solaegui Engineers, Ltd, 2018) 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.

The 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.

The 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 staff on the Project area roadway network occur from 7:00 to 8:00 a.m., 4:00 to 5:00 p.m., and 9:00 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 4-25. Miles traveled are expected to increase the most on the State Highway System (Green Dot, 2018).

Table 4-25
LASSEN COUNTY FUTURE DAILY VEHICLE MILES TRAVELED

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

4.14.1.2 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 #2018-003 are required for traffic generated by the existing operation:

> *7. 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.*
>
> *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.*

11. 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.

15. 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 4-26. 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 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 4-26
EXISTING ESTIMATED VEHICLE MILES TRAVELED

Description	Number of Trips Per Day	Average Trip Length (miles)	Vehicle Miles Traveled (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.

4.14.2.1 State

California Department of Transportation
Caltrans policies are applicable to SR-299 and SR-44 and 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 Section 15064.3
CEQA Guidelines Section 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.

4.14.2.2 Local

The General Plan Circulation Element contains the following policies related to circulation that are applicable to the Project:

- 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.
- 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.

Implementation measures:

- CE-E: Pursuant to impacts evaluated in an environmental impact report or other form of project review, the County may require mitigation measures which will ensure that project developers adequately and fairly compensate or participate with the County in the necessary upgrading and/or repair of the affected roads.

- CE-12: No public highway or roadway should be allowed to fall to or exist for a substantial amount of time at or below a Level of Service rating of "E" (i.e., road at or near capacity; reduced speed; extremely difficult to maneuver; some stoppages).

The Standish-Litchfield Area Plan states the following policy and implementation items related to circulation that are applicable to the Project:

- 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.
- 17.1 Rural and agricultural residential uses, other than those shown on the land use map, should not be allowed along State highways.
- 17.2 The County shall require applicants for new development projects to construct or upgrade the roads which will serve their projects to County standards.
- 17.3 Prior to the approval of all new projects, the County shall evaluate the potential effect on existing traffic patterns and shall require as a condition of approval, any improvements or in-lieu fees necessary to alleviate potential traffic congestion and/or to ensure traffic safety throughout the County.

4.14.3 Previous CEQA Review

4.14.3.1 1981 EIR

The 1981 *Environmental Impact Report for Operation of Aggregate Materials Source Operation of Rock Crushing Plant Operation of Asphalt Concrete Batch Plant (S.C.H. #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 sings 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.*

4.14.3.2 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.*

4.14.3.3 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 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

Significant transportation and traffic impacts that could occur were determined from the 2021 CEQA Guidelines. These guidelines provide guidance in defining significant transportation and

traffic impacts. Based on this guidance, a project may be deemed to have a significant impact to transportation and traffic if it will:

- 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 Project will not increase or change the distribution of current traffic generated by the existing operation. The Project will continue to comply with Condition of Approval #8 for Use Permit Amendment #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. The Project will continue to comply with the additional Conditions of Approval related to traffic for Use Permit #2018-003 for truck traffic distribution on area roadways and requiring assistance with roadway improvements. Traffic volumes generated by the Project will not exceed the peak hour traffic numbers analyzed in the 2019 EIR.

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. 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. The Project will not result in a change or increase the severity of these impacts.

An analysis of vehicle miles traveled as required by CEQA Guidelines section 15064.3 is included below.

Impact 4.14.5.1 Conflict with or be inconsistent with CEQA Guidelines section 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

The Project 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 4-26. 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 Project are located near Lake Almanor or north of Reno in Nevada. Therefore, the Project results in an overall decrease in VMT for construction projects within Lassen County.

The Project will not result in an increase in VMT and will not conflict with or be inconsistent with CEQA Guidelines section 15064.3. This impact will be less than significant.

4.14.6 Mitigation Measures

No mitigation measures are required.

4.14.7 Level of Significance after Mitigation

The Project will not conflict with or be inconsistent with CEQA Guidelines section 15064.3.

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 of the Project.

4.15.1 Environmental Setting

4.15.1.1 Fire Hazard Severity Zone

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 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 CAL FIRE on November 7, 2007, the Project site is located in a Fire Hazard Severity Zone designated as Moderate.

4.15.1.2 Fire Hazards

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 (County of 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 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

4.15.2.1 State

Senate Bill 1241 (Kehoe, 2012)
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)

4.15.2.2 Local Regulations

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 Review

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

Significant impacts that could occur were determined from the 2021 CEQA Guidelines. These guidelines provide guidance in defining significant wildfire impacts. Based on this guidance, if the Project is located in or near a state responsibility area or lands classified as very high fire hazard severity zones, the Project would have a significant impact related to wildfire if it would:

- 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 slop instability, or drainage changes.

4.15.5 Impact Analysis

The Project site is located in a State Responsibility Area in a Fire Severity Hazard Zone designated as Moderate. The Project includes elements that could influence wildfire factors at the Project site. Mining equipment will be operated and blasting will occur in the 51-acre expansion area. The Project will result in mining and reclamation activities that will change topography and vegetation at the Project site.

Impact 4.15.5.1 The Project could substantially Impair an Adopted Emergency Response Plan or Emergency Evacuation Plan

The Project site 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 Project does not include an increase in peak traffic volumes generated by the existing operation. The Project will not interfere with the implementation of or physically interfere with an adopted emergency response or evacuation plan. This impact is less than significant.

Impact 4.15.5.2 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

Mining in the current mining boundary of the Project site has resulted in changes in 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. Mining activities in the expansion area will result in an increase in slopes in the eastern portion of the expansion area as mining progresses. Mine faces will be shaped to have a 50-foot highwall and 12-foot benches at a 1:1 slope.

Wildfire factors at the Project site 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. The creation of steeper slopes along the eastern boundary of the expansion area could result in more rapid and intense burn upslope if wildfire were to occur at the Project site after reclamation activities when the Project site is revegetated. However, final slopes will also be more gradual on the pit floors.

The Project does not include residential developments or permanent occupied structures. Residences in the Project vicinity are located downslope of the Project site, and on agricultural parcels surrounded by fields. There are no residences or occupied land uses upslope of the Project site. The land upslope of the Project site is undeveloped agricultural and open space (public lands).

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.

The Project will result in a less than significant impact related to the exposure of Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

Impact 4.15.5.3 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. The Project will not require installation of fire breaks or additional water sources, power lines, or other utilities. The Project 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. Impacts of the internal roads are included in the analysis of the Project. The Project does not include construction of any infrastructure that may exacerbate fire risk or result in temporary or ongoing impacts to the environment. This impact is considered less than significant.

Impact 4.15.5.4 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.

The Project does not include development of housing or additional structures; however, the Project site will be occupied by employees. 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. The Project will not expose people or structures to significant risks. This impact is considered less-than significant.

4.15.6 Mitigation Measures

No mitigation measures are required.

4.15.7 Level of Significant after Mitigation

Project impacts related to wildfire (Impact 4.15.5.1 through 4.15.5.4) will be less than significant.

5.0 OTHER CEQA CONSIDERATIONS

CEQA Guidelines section 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 Project are discussed in this section. Cumulative impacts are also discussed in this section as required by CEQA Guidelines Section 15130. Significant environmental effects and the mitigation measures proposed to minimize the significant effects are included in Section 2 of the DSEIR.

5.1 Growth-Inducing Impacts

The Project will not result in any direct growth-inducing impacts. The Project includes expansion of the mining area of the current mine and increase in annual production that will allow extension of the mining operation for an additional 20 years (until the year 2050) beyond the end date included in the current use permit. The Project does not involve the construction of any new housing. In addition, the 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 Project site will be reclaimed to open space and wildlife habitat. For these reasons, the Project will not result in substantial growth inducement.

5.2 Significant and Unavoidable Adverse Impacts

Many of the impacts of the Project will be less than significant or will be mitigated to a less-than-significant level with the implementation of mitigation measures. The Project impacts below will remain significant and unavoidable after mitigation.

- Biological Resources: The Project includes expansion of the mine boundary by an additional 51 acres and extension of the life of the mine an additional 20 years. Expansion of the mine boundary and extending the life of the mine will result in additional impacts to pronghorn and mule deer. The Project will result in additional loss of winter habitat and disturbance/displacement of these species in the 51 acre expansion area and surrounding areas. Extending the life of the mine will also prolong the amount of time before the existing mining area and proposed expansion area can be reclaimed back to habitat for these species. The Project would result in significant impacts to pronghorn antelope and mule deer.

5.3 Significant Irreversible Environmental Changes

The Project includes expansion of the mining area by 51 acres, increase of material extracted annually, and extension of the life of the mining operation. The Project includes increasing the operational period of the mine by 20 years beyond the end date of 2030 included in Use Permit Amendment #2018-003 for the current mining operation. 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. In addition, 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. Fossil fuel use by the Project will end in 2050.

Irreversible damage from accidents caused by the Project is unlikely. Hazardous materials handling and blasting are conducted in accordance with local, state and federal regulations to minimize risk and exposure. The Project will not result in significant irreversible environmental changes.

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 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 Pit. 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 June 2020 or later. Re-zoning and lot line adjustments are not included below.

- Use Permit #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. APN: 013-040-46

- UP 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 #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 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 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 #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 #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 #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 #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 June 1, 2020:

- 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 State Route (SR) 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 SR 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

5.4.2.1 Aesthetics and Visual Resources

Aesthetic and visual resource impacts of the Project include mining activities in the previously undisturbed 51-acre expansion area. The geographic scope for cumulative visual resource impacts includes the viewsheds that will be affected by the 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.

Have a cumulative substantial adverse effect on a scenic vista

As discussed in the Aesthetics and Visual Resources Section of the DSEIR, 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. The Project will have no impact to a scenic vista. Therefore, the 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 Project is not located in an area that is designated as scenic highway. The Project is visible from portions of Highway 395 for a distance of approximately 2 miles; however, 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. The Project will not result in impacts to scenic resources within a state scenic highway; therefore, the impacts of the 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 Project 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. The 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 Project will not create a substantial new source of light or glare. The Project 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.

5.4.2.2 Agriculture and Forestry Resources

Agriculture and Forestry impacts of the 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. There is no impact or conflict with existing uses or a Williamson Act contract, therefore the impacts of the Project are not cumulatively considerable. The Project will not contribute to a cumulative impact related to the conflict with existing zoning for agricultural use or a Williamson Act contract.

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 Project does not impact forestland. The 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.

According to the FMMP Important Farmland Map, no portion of the Project site is designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. The Project will not impact Farmland. The 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 the Agriculture and Forestry Resources Section of the DSEIR, the Project will result in the loss of approximately 51 acres of low capability grazing land during the duration of the Project. 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 this General Plan. Once mining is complete, the expansion area and current mining area will be reclaimed in accordance with the Reclamation Plan to open space and wildlife habitat and will be available for use as grazing. The contribution of the Project to a cumulative impact will be less than significant.

5.4.2.3 Air Quality

The geographic context for cumulative air quality impacts for the Project includes the immediate area surrounding the Project site as well as the Northeast Plateau Air Basin. 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.

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 Air Pollution Control District. Therefore, Lassen County is not subject to an air quality plan. The Project is subject to the Lassen County Air Pollution Control District rules and

regulations. The daily and annual emissions generated by the Project are below the Lassen County APCD emission thresholds for ROG, NOx, PM_{10}, $PM_{2.5}$ and CO for new sources or modification of an existing source. These thresholds are project specific. As required by the mitigation measures in the Air Quality Section, reasonable precautions will be taken to prevent particulate matter from becoming airborne. The Project will not contribute to a cumulative impact related to an air quality plan. The cumulative impact of the Project related to compliance with Lassen County APCD rules and regulations will be less than significant with mitigation incorporated.

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 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 Project are included in the Air Quality Section of this DSEIR. Cumulative air quality impacts of the Project related to criteria pollutants will be less than significant.

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. The adjacent mine does not have any generators, therefore cumulative impacts related to toxic air contaminants are anticipated to be less than significant.

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, which would not include odorous compounds at the low concentrations expected. The odor emissions, if any, would be unlikely to cause a nuisance to the nearby residential areas. Diesel-fueled equipment exhaust would generate some odors. These odors have the potential to result in cumulative odor impacts in combination with additional nearby sources of diesel fueled equipment exhaust. 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 Project does not include an increase in haul truck traffic. As discussed under Impact 4.4.5.4, odor emissions are highly dispersive, especially in areas with higher average wind speeds. The cumulative odor impacts of the Project will be less than significant.

5.4.2.4 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 site 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)

As discussed in the Biological Resources Section of the DSEIR, the Project-level impacts to special-status species were determined to be less than significant with mitigation. Mitigation measures are included in Section 4.5.6. 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. These mitigation measures will reduce the Project-level impacts to special-status species to be less than significant.

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 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. Cumulative impacts of the Project to special-status species will be less than significant with implementation of the mitigation measures contained in the Biological Resources section (4.5.6) of the DSEIR.

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 4.5.5 of the DSEIR, Project impacts to mule deer and antelope include direct habitat loss and displacement from human disturbance. The temporary loss of 51 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 pit 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 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 cumulative impact related to the displacement of mule deer and antelope from winter habitat.

5.4.2.5 Cultural Resources and Tribal Cultural Resources

The geographic context for cumulative impacts to cultural resources and Tribal Cultural Resources is regional.

The Project would cause a substantial adverse change in the significance of a historical or archaeological resource pursuant to § 15064.5

As discussed in the Cultural Resources section of the DSEIR, the 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 significant of currently undiscovered cultural or archeological resources at the Project site. Mitigation measures for impacts to Cultural Resource contained in section 4.6.6 of the DSEIR 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 measures for the Project, cumulative impacts of the Project to historical or archeological resources would be 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 the Project. Mitigation Measure 4.6-3 is included for the Project to ensure that impacts related to the disturbance of human remains would be less than significant. This mitigation measure would ensure the Project's contribution to a cumulative impact would be 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 Cultural and Tribal Cultural Resources section of the DSEIR 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 mitigation incorporated, impacts of the Project in combination with impacts from past, present, or reasonably foreseeable projects will result in a less-than-significant cumulative impact on tribal cultural resources.

5.4.2.6 Energy

The geographic context for cumulative impacts related to Energy Consumption is both local and regional. Cumulative projects include projects relying on the same energy sources as the Project. The Project uses fuel to operate onsite equipment and material haul trucks. There are no known future projects in the County that require significant energy or fuel demands.

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 Project 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 Project will not result in an increase in permitted daily or maximum haul traffic. The 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 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 Project will not have a negative impact on regional energy supplies and will not result in the need for any additional capacity. The Project will have no impacts on peak and base period demand for electricity and other forms of energy.

The Energy Consumption impacts of the Project are less than significant. The Project will not combine with other projects to create a significant impact on local and regional energy supplies resulting in a need of additional capacity. The Project will not combine with other projects to result in an increase on peak and base period demand for electricity and other forms of energy or result in a significant impact on energy resources. Cumulative impacts of the Project related to Energy Consumption will be less than significant.

Conflict or obstruct a state or local plan for renewable energy or energy standards

The Project will not conflict or obstruct a state or local plan for renewable energy resources or energy standards. The Project will not contribute to a cumulative impact related to conflict with a state or local plan for renewable energy or energy standards.

5.4.2.7 Geology and Soils

The geographic context for impacts related to Geology and Soils includes the immediate Project area for impacts related to geologic hazards and expansive soils. Soil erosion and loss of topsoil

is cumulatively considerable in combination with all projects within the Deep Creek-Secret Creek watershed.

Expose people or structures to potential substantial adverse effects, including risk of loss, injury, or death involving:

ix) 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?

x) Strong seismic ground shaking?

xi) Seismic-related ground failure, including liquefaction?

xii) Landslides?

The 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 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 Geology and Soils section of the DSEIR, the proposed 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 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 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. Project-level impacts are less than significant. The Project is cumulatively considerable when combined with mining within the current mining boundary of the operation. The materials of the current mining operation adjacent to the proposed expansion area is similar to that of the expansion area. The cumulative impact of the Project is less than significant.

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 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 Project are not cumulatively considerable.

Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

The proposed expansion does not include the use of any septic tanks or alternative waste water disposal systems. This impact of the 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 the Geology and Soils section of the DSEIR 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 Project with the incorporation of mitigation measures contained in in the DSEIR would reduce the potential cumulative impact of the Project to a less-than-significant level

5.4.2.8 Greenhouse Gas Emissions

Generally, individual projects are insufficient by themselves to influence climate change or result in a substantial contribution to the global GHG 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. Small contributions to this cumulative impact (from which significant effects are occurring and are expected to worsen over time) may be potentially considerable and therefore significant.

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 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 Project 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 Air Pollution Control District nor Lassen County have currently adopted a region-specific plan for reducing GHG emissions. As discussed under Impact 4.5.5.1 above, GHG emissions generated by the 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 Project would not conflict with any applicable plans, polices, or regulations adopted for the purpose of reducing the emissions of greenhouse gases. This impact would be less than significant. The 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.

5.4.2.9 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 context for the evaluation of cumulative impacts associated with operation of the Project includes projects that would increase the amount of hazardous materials used, disposed of, and transported in combination with other development in Lassen County.

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 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 the Hazards and Hazardous Materials section of the DSEIR, 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 Project will not expose people or structures to a significant risk or loss, injury or death involving wildland fires. The Project risk of wildfire is cumulatively considerable in combination with potential fire sources in the Project vicinity including the neighboring BLM mine, and neighboring agricultural and residential activities. With Fire Prevention and Control standards, the Project will result in a less-than-significant contribution to a cumulative wildland fire impact.

5.4.2.10 Hydrology and Water Quality

The geographic context for cumulative impacts to Hydrology and Water Quality includes the Deep Creek-Secret Creek watershed for surface water impacts. The geographic context for cumulative groundwater impacts includes the entire Honey Lake Valley Groundwater Basin.

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 California's *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. The 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 be secured and Spill Prevention and Countermeasure Plan for fuel storage be approved by the RWQCB. With these measures in place, the Project will result in a less-than-significant contribution to groundwater quality impacts.

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. Groundwater impact of the Project may have a cumulative impact when considered with all current and future projects within the same groundwater basin that may utilize groundwater. As discussed in Section 4.11 of this DSEIR, within this basin, California's *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. Cumulative impacts to groundwater supplies will be less than significant.

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 from the Project will be retained onsite. There are no surface waters onsite and the Project will not alter the course of a stream or river. The expansion area is 51 acres and will not 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. Ponds will be 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 Project are confined to the Project site and are not cumulatively considerable.

In flood hazard, tsunami, or seiche zones, risk release of pollutants due to inundation

The Project site is not in an area subject to inundation by seiche, tsunami, or mud flow. There is no 100-year flood hazard area onsite. The Project was determined to have no impact. The Project will 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. The Project will result in less than significant cumulative impacts related to conflict or obstruction of a water quality control plan or sustainable groundwater management plan.

5.4.2.11 Land Use

The geographic context for Land Use impacts includes the entirety of Lassen County. The Project will have no impact related to physically dividing an established community or conflict with any applicable habitat conservation plan or natural community conservation plan.

Conflict with Lassen County General Plan or Standish-Litchfield Area Plan

The 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 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 General Plan and 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 Project 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 Project will not contribute to significant cumulative impact related to conflict with Lassen County General Plan or Standish-Litchfield Area Plan.

The Project is cumulatively considerable in combination with existing mining operation at the Project site and the BLM mine south of the Project site. The Project could add to the impacts of the existing mining operation and the BLM mine by creating additional noise, activity, dust and other emissions. Compatibility of policies related to impacts to Biological Resources, Noise, and Air Quality are addressed in their respective sections of the DSEIR.

5.4.2.12 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 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 Noise section of the DSEIR, 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 #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. Noise from material haul truck operations is cumulatively considerable in combination with any future traffic increases through the year 2050. Traffic from the 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 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 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 Project 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. Groundborne noise and vibration in the expansion area will be less-than significant. Vibration and groundborne noise from the Project are cumulatively considerable in combination with other sources adjacent to the Project site. There are no projects within the area that will include stationary sources of vibration or ground borne noise levels. 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. The Project will not result in a significant cumulative impact related to groundborne vibration and groundborne noise levels.

5.4.2.13 Transportation and Traffic

The geographic context for cumulative impacts for Transportation and Traffic impacts includes the roadway network utilized by the Project. Project traffic will 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.

An analysis of cumulative VMT impacts of the Project is discussed below.

Conflict or be inconsistent with CEQA Guidelines section 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 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 Project will likewise result in a less-than-significant cumulative impact related to VMT.

5.4.2.14 Wildfire

The geographic context for cumulative impacts related to Wildfire includes projects 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 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 the Wildfire section of the DSEIR (4.15), 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 Project occupants 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 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. The Project will not expose people or structures to significant risks. Project-level impacts were determined to be less than significant. This impact is Project-site specific and not-cumulatively considerable.

6.0 ALTERNATIVES TO THE PROPOSED PROJECT

The CEQA Guidelines require that EIRs include a comparative evaluation of alternatives to the Project that are capable of feasibly attaining most of the basic objectives of the proposed Project, but would avoid or substantially lessen any of the significant effects of the Project. This includes an evaluation of a "reasonable range" of feasible alternatives, including the "no project" alternative.

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 96056 and Use Permit Amendment #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 Project 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 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

CEQA Guidelines Section 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 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 Project Objectives

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 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).

The proposed Use Permit and Reclamation Plan Amendment (Project) includes the following changes to the previously permitted operations:

4. Expansion of approximately 51 acres, with an associated additional volume of 5,000,000 tons of material
5. Extension of life of the mine from 2030 to 2050
6. Increase of maximum volume per year from 100,000 tons to 200,000 tons per year

With these amendments, the facility will continue to provide local construction materials in Lassen County. The Project applicant has identified the following objectives for the 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

6.3 No Project Alternative

6.3.1 Description

The No Project Alternative includes the continuation of mining operations at the site as currently permitted under Use Permit 96056 and Use Permit Amendment #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.

6.3.2 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.

6.3.3 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.

6.4 Reduced Expansion

6.4.1 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.

6.4.2 Impacts

6.4.2.1 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. The Aesthetic and Visual Resource impacts of the Reduced Expansion Alternative would be less than significant.

6.4.2.2 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. The agricultural and forestry impacts of the Reduced Expansion Alternative would be less than significant.

6.4.2.3 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. The air quality impacts of the Reduced Expansion Alternative would be less than significant.

6.4.2.4 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.

6.4.2.5 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 are potentially significant without mitigation.

6.4.2.6 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. The energy impacts of Reduced Expansion Alternative would be less than significant.

6.4.2.7 Geology and Soils

The geology and soil impacts of the Reduced Expansion Alternative would be the same 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 waste water disposal systems and septic tanks would occur. Impacts related to erosion of topsoil and paleontological resources and unique geologic features would be potentially significant without mitigation.

6.4.2.8 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. The Reduced Expansion Alternative would result in less than significant greenhouse gas emission impacts.

6.4.2.9 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. The Reduced Expansion Alternative would result in less than significant impacts related to hazards and hazardous materials.

6.4.2.10 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. The Reduced Expansion Alternative would result in less than significant impacts to hydrology and water quality.

6.4.2.11 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.

6.4.2.12 Noise

The Reduced Expansion Alternative would result in similar nose 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. Noise impacts of the Reduced Expansion Alternative will be less than significant.

6.4.2.13 Transportation and Traffic

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. Traffic impacts of the Reduced Expansion Alternative would be less than significant.

6.4.2.14 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.

6.5 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.

6.6 Alternatives Considered but Rejected from Further Consideration

Additional alternatives were considered but were rejected from further consideration because they either did not differ substantially from those already analyzed or they did not meet any of the Project objectives. Those addressed and disregarded as infeasible include:

Alternative Project Location. An alternative Project location was considered but rejected because the materials at the site are considered superior material not commonly found in the region. In addition, the Project includes specific modifications to an existing operation that may not be feasible at an alternate existing mining site. For these reasons, an alternative Project location was rejected from further analysis.

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 result in a reduction of impacts from the proposed Project.

6.7 Environmentally Superior Alternative

CEQA Guidelines Section 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 objects. 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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