4.7 NOISE AND VIBRATION

4.7.1 INTRODUCTION

This Noise section of the Draft SEIR evaluates the noise environment known to occur or potentially occur within the project site and area, and assesses the effects of the proposed project on the noise environment of the County. Information for this section has been drawn primarily from the Yolo County General Plan[1] and associated EIR,[2] the Cache Creek Area Plan (CCAP) Update FEIR,[3] the 1996 EIR.[4]

Government agencies and the public were provided an opportunity to comment on the proposed project in response to the Notice of Preparation (NOP) that provided a preliminary summary of proposed project. No comments pertaining to noise and vibration were submitted. NOP comment letters are included in Appendix B of this Draft SEIR.

The following subsections describe the existing noise setting of the County and specifically in the lower Cache Creek area, the applicable regulatory framework, standards of significance used to determine potential environmental effects that may result from implementation of the project, potentially significant impacts associated with relevant substantial changes in the project and/or the circumstances under which the project will be undertaken, and/or new information as defined by CEQA Guidelines Section 15162, and new or different feasible mitigation measures to reduce those impacts to a less-than-significant level, if applicable.

4.7.2 EXISTING ENVIRONMENTAL SETTING

The following setting information provides general information on noise and vibration and technical terms, and a brief summary of the conditions described in more detail in the above-referenced documents and includes any new information relevant to noise that has become available since the 1996 EIR was published.

General Information on Noise

Noise is commonly defined as unwanted sound that annoys or disturbs people and can have an adverse psychological or physiological effect on human health. Sound is measured in decibels (dB), which is a logarithmic scale. Decibels describe the purely physical intensity of sound based on changes in air pressure, but they cannot accurately describe sound as perceived by the human ear since the human ear is only capable of hearing sound within a limited frequency range. Therefore, the frequency of a sound must be taken into account when evaluating the potential human response to sound. For this reason, a frequency-dependent weighting system is used and monitoring results are reported in A-weighted decibels (dBA). Decibels and other technical terms

[1] Yolo County. 2030 Countywide General Plan. November 10, 2009.

[2] Yolo County. Yolo County 2030 Countywide General Plan Environmental Impact Report. SCH #2008102034. April 2009.

[3] Yolo County. Cache Creek Area Plan Update Project, Final Environmental Impact Report. SCH #2017052069. December 2019.

[4] Yolo County, 1996, Final Environmental Impact Report for Solano Long-term Off-Channel Mining Permit Application SCH #96012034, (combined DEIR and Responses to Comments documents)..

are defined in Table 4.7-1. Typical A-weighted noise levels at specific distances are shown for different noise sources in Table 4.7-2.

In an unconfined space, such as the outdoors, noise attenuates with distance. Noise levels at a known distance from point sources are reduced by 6 dBA for every doubling of that distance for hard surfaces, such as cement or asphalt surfaces, and 7.5 dBA for every doubling of distance for soft surfaces, such as undeveloped or vegetative surfaces.[5] Noise levels at a known distance from line sources (e.g. roads, highways, and railroads) are reduced by 3 dBA for every doubling of the distance for hard surfaces and 4.5 dBA for every doubling of distance for soft surfaces.[6] Greater decreases in noise levels can result from the presence of intervening structures or buffers.

Table 4.7-1: Definition of Acoustical Terms

Term	Definition
Decibel (dB)	A unit describing the amplitude of sound on a logarithmic scale. Sound described in decibels is usually referred to as sound or noise "level." This unit is not used in this analysis because it includes frequencies that the human ear cannot detect.
Frequency (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure.
A-Weighted Sound Level (dBA)	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound, in a manner similar to the frequency response of the human ear, and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted.
Equivalent Noise Level (L_{eq})	The average A-weighted noise level during the measurement period. For this CEQA evaluation, L_{eq} refers to a 1-hour period unless otherwise stated.
Community Noise Equivalent Level (CNEL)	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels to sound levels during the evening from 7 to 10 p.m. and after addition of 10 decibels to sound levels during the night between 10 p.m. and 7 a.m.
Day/Night Noise Level (L_{dn})	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to sound levels during the night between 10 p.m. and 7 a.m.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Peak Particle Velocity (PPV)	The maximum instantaneous peak of a vibration signal.
Root Mean Square (RMS) Velocity	The average of the squared amplitude of a vibration signal.

Sources: Charles M. Salter Associates Inc., 1998. Acoustics – Architecture, Engineering, the Environment, William Stout Publishers. Federal Transit Administration, 2006. Transit Noise and Vibration Impact Assessment (FTA-VA-90-1003-06).

[5] California Department of Transportation (CalTrans), 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol. September

[6] Ibid.

A typical method for determining a person's subjective reaction to a new noise is by comparing it to existing conditions. The following describes the general effects of noise on people:[7]

- A change of 1-dBA cannot typically be perceived except in carefully controlled laboratory experiments;
- A 3-dBA change is considered a just-perceivable difference;
- A minimum of 5-dBA change is required before any noticeable change in community response is expected; and
- A 10-dBA change is subjectively perceived as approximately a doubling or halving in loudness.

Table 4.7-2: Typical Sound Levels Measured in the Environment and Industry

Noise Source (Distance in Feet)	A-Weighted Sound Level in Decibels (dBA)
Jet aircraft (200)	112
Subway Train (30)	100
Truck/Bus (50)	85
Vacuum Cleaner (10)	70
Automobile (50)	65
Normal Conversation (3)	65
Whisper (3)	42

Source: Charles M. Salter Associates Inc., 1998. Acoustics – Architecture, Engineering, the Environment, William Stout Publishers.

Because sound pressure levels are based on a logarithmic scale, they cannot be added or subtracted in the usual arithmetical way. For instance, if one noise source emits a sound level of 90 dBA, and a second source is placed beside the first and also emits a sound level of 90 dBA, the combined sound level is 93 dBA, not 180 dBA. When the difference between two noise levels is 10 dBA or more, the amount to be added to the higher noise level is zero. In such cases, no adjustment factor is needed because adding in the contribution of the lower noise source makes no perceptible difference in what people can hear or measure. For example, if one noise source generates a noise level of 95 dBA and another noise source is added that generates a noise level of 80 dBA, the higher noise source dominates and the combined noise level will be 95 dBA.

General Information on Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Several different methods are used to quantify vibration. Typically, groundborne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors to vibration include structures (especially older masonry structures), people (especially residents, the elderly,

[7] Charles M. Salter Associates Inc., 1998. Acoustics – Architecture, Engineering, the Environment, William Stout Publishers.

and sick), and vibration-sensitive equipment. As defined in Table 4.7-1, vibration measurements (i.e., amplitudes) are usually expressed as either peak particle velocity (PPV) or the root mean square (RMS) velocity. The PPV is appropriate for evaluating potential damage to buildings, but it is not suitable for evaluating human response to vibration because it takes the human body time to respond to vibration signals. The response of the human body to vibration is dependent on the average amplitude of a vibration. The RMS of a signal is the average of the squared amplitude of the signal and is more appropriate for evaluating human response to vibration. The PPV and RMS are normally described in units of inches per second (in/sec), and RMS is also often described in vibration decibels (VdB).

Description of Regional Environment

As described in the 1996 EIR, the major noise sources in the project area continue to be associated with transportation (i.e., vehicles traveling on the local and regional roadway network), agricultural and mining (including processing) activities, and aircraft activity.

Traffic Noise

The CEMEX site is served by regional freeways and highways in the state system. Regional north-south access is provided by Interstate 5 (I-5) and Interstate 505 (I-505). State Route 16 (SR 16) is located south of the site and runs in a generally east-west direction. Highway traffic noise levels are derived from the Health and Safety Element of the Yolo County General Plan and summarized below:

- I-5 travels through eastern Yolo County. Noise levels along I-5 at 100 feet from the road centerline range from 65 to 70 dBA Ldn, with the highest noise levels along roadway segments closest to the Sacramento County line.

- I-505 bisects the proposed project and noise levels at 100 feet from the roadway centerline range between 61 and 64 dBA Ldn. The segment near Winters experiences the highest volumes of traffic and levels of roadway noise.

- SR 16 provides the major connection from I-5 through Woodland, and northwest through the Capay Valley. Noise levels at 100 feet from the roadway centerline range from 63 to 65 dBA Ldn. The highest noise levels along the roadway are generally found on segments west of I-505.

Agriculture

Agricultural activities currently take place on a large portion of the project site. Noise sources associated with agricultural activities include field and crop maintenance, hauling, and crop dusting from small aircraft. The noise from these sources mostly occurs within the confines of the agricultural fields and is seasonal. A characteristic of agricultural noise is short periods of noisy activities separated by long periods of little or no noise-producing activities. Mechanical equipment and trucking are primary sources of noise associated with agricultural goods processing facilities.

Mining Operations and Hauling

Noise related to mining operations is associated with extracting sand and gravel aggregate material and transporting it to processing plants located along lower Cache Creek. Noise-generating equipment used in mining include bulldozers, loaders, scrapers, drag lines, and dredges. Aggregate material is generally transported to a processing plant by conveyors, but on-site haul trucks or scrapers are also used. The processing of aggregate material is typically done at a stationary processing plant within the boundaries of the mining site. Noise-producing activities include crushing, sorting, and loading of aggregate materials. Noise generated during processing is considered fixed-source noise. Aggregate materials, once processed, are hauled from the processing plant to construction sites within and outside of Yolo County. Noise is generated on access roads, designated haul routes (County roads) and on SR 16 and I-505, as haul trucks travel to and from the plant sites. The noise from these linear sources includes noise emanating from all other vehicles using the roadways.

Aircraft Activities

The Watts-Woodland Airport is the nearest public airport to the project site. The CNEL 60 contours for the airport are primarily within airport property,[8] which is located approximately two miles east of the project site.

Description of Local Environment

Similar to the regional environment, the major noise sources on and adjacent to the project site are associated with vehicular activity, agricultural activities, mining and processing activities, and aircraft activity.

As explained Chapter 3 – Project Description, the asphalt and concrete plants located on the project site are operated and permitted through separate approvals from the County. While these two permits are separate and distinct, both rely exclusively on aggregate material from the permitted CEMEX operation for which annual and total tonnage (both mined and sold) are controlled through current approvals. Also, the CEMEX conditions of approval and Development Agreement require the plants to cease operation and the plant site to be reclaimed in accordance with the CCAP at the end of the permit period, unless additional mining approvals are subsequently granted by the County, as is requested as a part of the subject application. Noise generated from these existing plants is not anticipated to change under the project and therefore no further noise analysis of these facilities was conducted as part of this Draft SEIR analysis.

Noise-Sensitive Receptors

An important consideration in regard to the noise environment is the presence and location of potential noise-sensitive receptors. As defined in the Yolo County 2030 Countywide General Plan (Action HS-A62), noise-sensitive receptors include residentially designated land uses, hospitals, nursing/convalescent homes, and similar board and care facilities, hotels and lodging, schools and day care centers, and neighborhood parks.

[8] Sacramento Area Council of Governments, 2021. Airport Noise Contours, GIS tool, accessed July 14, 2022.

The predominant land uses in the vicinity of the site include aggregate mining and processing, agriculture and open space associated with Cache Creek. To the north, the site is bounded by Cache Creek and agricultural lands that lie beyond it. To the east, the site is bounded by agriculture as well as a rural residential / commercial land use. To the south, the site is bounded by SR 16 and agriculture, with a few rural residences. To the west (with the exception of Phase 7), the site is bound by I-505. Phase 7 is bounded to the west by agriculture and rural residences. The closest rural residences are greater than 1,000 feet from the proposed surface mining disturbance boundary.

There are several schools and day care centers located in Madison. The Madison Migrant Children's Center on SR 16 near County Road 89 is located 4,400 feet away from the mining boundary as depicted in Figure 3-6). The Esparto High School located in Esparto on SR 16 is 3.2 miles away from the mining boundary. The primary medical facility is the Woodland Memorial Hospital located in the City of Woodland 6.3 miles away from the mining boundary.

4.7.3 REGULATORY CONTEXT

Since the 1996 EIR was certified, many of the applicable laws and regulations have continued to evolve. The following is a description of the current federal, State, and local environmental laws and policies that are relevant to the review of noise and vibration under the CEQA process.

Federal Regulations

The following are the federal regulations relevant to noise.

OSHA Regulations

The federal Occupational Safety and Health Administration (OSHA) addresses back-up alarms in the following regulations:

- 29 CFR 1926.601(b)(4) – motor vehicles operating on an off-highway jobsite
- 29 CFR 1926.602(a)(9) – earthmoving equipment

Off-highway vehicles must have backup alarms that are "audible above the surrounding noise level." (29 CFR 1926.601(b)(4).) Earthmoving equipment must have backup alarms that are "distinguishable from the surrounding noise level" (29 CFR 1926.602(a)(9).)

Mine Safety and Health Administration Regulations

The federal Mine Safety and Health Administration (MSHA) addresses back-up alarms in 30 CFR 56.14132(b), which requires that self-propelled mobile equipment with an obstructed rear view have a back-up alarm that is "audible above the surrounding noise level." (30 CFR 56.14132(b).) This provision allows for nighttime only use of an automatic reverse-activated strobe light in-lieu of an audible reverse alarm. Conveyor alarms are addressed in 30 CFR 57.14201, which provides:

a. When the entire length of the conveyor is visible from the starting switch, the conveyor operator shall visually check to make certain that all persons are in the clear before starting the conveyor.

b. When the entire length of the conveyor is not visible from the starting switch, a system which provides visible or audible warning shall be installed and operated to warn persons that the conveyor will be started. Within 30 seconds after the warning is given, the conveyor shall be started or a second warning shall be given.

State Regulations

The following are new and additional State environmental laws and policies relevant to noise.

California Vehicle Code

The California Vehicle Code § 27000(d)(1) provides:

> A construction vehicle with a gross vehicle weight rating (GVWR) in excess of 14,000 pounds that operates at, or transports construction or industrial materials to and from, a mine or construction site, or both, shall be equipped with an automatic backup audible alarm that sounds on backing and is capable of emitting a sound audible under normal conditions from a distance of not less than 200 feet.

Cal/OSHA Regulations

The California Division of Occupational Safety and Health, known as "Cal/OSHA," is a division of the California Department of Industrial Relations (CDIR). The CDIR regulations (Cal. Code Regs., tit. 8, § 1592.) provide the following requirements for backup warning devices:

a. Every vehicle with a haulage capacity 2 ½ cubic yards or more used to haul dirt, rock, concrete, or other construction material shall be equipped with a warning device that operates automatically while the vehicle is backing. The warning sound shall be of such magnitude that it will normally be audible from a distance of 200 feet and will sound immediately on backing. In congested areas or areas with high ambient noise which obscures the audible alarm, a signaler, in clear view of the operator, shall direct the backing operation.

b. Those vehicles not subject to 1592(a) and operating in areas where their backward movement would constitute a hazard to employees working in the area on foot, and where the operator's vision is obstructed to the rear of the vehicle shall be equipped with an effective device or method to safeguard employees such as:
   1) An automatic back-up audible alarm which would sound immediately on backing, or
   2) An automatic braking device at the rear of the vehicle that will apply the safety brake immediately on contact with any obstruction to the rear, or
   3) In lieu of 1 or 2 above, administrative controls shall be established such as:
      A. A spotter or flagger in clear view of the operator who shall direct the backing operation, or
      B. Other procedures which will require the operator to dismount and circle the vehicle

immediately prior to starting a back-up operation, or

C. Prohibiting all foot traffic in the work area.

4) Other means shall be provided that will furnish safety equivalent to the foregoing for personnel working in the area.

c. All vehicles shall be equipped with a manually operated warning device which can be clearly heard from a distance of 200 feet.
d. The operator of all vehicles shall not leave the controls of the vehicle while it is moving under its own engine power.
e. Hauling or earth moving operations shall be controlled in such a manner that equipment or vehicle operators know of the presence of rootpickers, spotters, lab technicians, surveyors, or other workers on foot in the areas of their operations.

Thus, vehicles with a hauling capacity of 2 ½ cubic yards or more are required to have a backup warning system that is capable of being heard at least 200 feet away. Vehicles not falling into that category have other options for backup warnings, including the use of a spotter.

Department of Industrial Relations Variance Procedures

An employer may apply to the CDIR's Occupational Safety and Health Standards Board for a permanent variance from a Cal/OSHA regulation by demonstrating by a preponderance of the evidence that an alternative program, method, practice, means, device, or process will provide equal or superior safety. (Cal. Labor Code § 143.)

Local Regulations

The following are any new or additional regulatory agencies and regulations pertinent to the proposed project on a local level not identified in the 1996 EIR (or have been substantially updated since the 1996 EIR was approved).

2030 Countywide General Plan

The 2030 Countywide General Plan contains the following goals, policies, and actions related to the noise environment that are relevant to the proposed project:

Goal HS-7: Noise Compatibility. Protect people from the harmful effects of excessive noise.

Policy HS-7.1: Ensure that existing and planned land uses are compatible with the current and projected noise environment. However, urban development generally experiences greater ambient (background) noise than rural areas. Increased density, as supported by the County in this General Plan, generally results in even greater ambient noise levels. It is the County's intent to meet specified indoor noise thresholds, and to create peaceful backyard living spaces where possible, but particular ambient outdoor thresholds may not always be achievable. Where residential growth is allowed pursuant to this general plan, these greater noise levels are acknowledged and accepted, notwithstanding the guidelines in Figure HS-7 [of the General Plan].

Policy HS-7.3: Protect important agricultural, commercial, industrial, and transportation uses from encroachment by land uses sensitive to noise and air quality impacts.

Policy HS-7.5: Minimize the impact of noise from transportation sources including roads, rail lines, and airports on nearby sensitive land uses.

Policy HS-7.8: Encourage local businesses to reduce vehicle and equipment noise through fleet and equipment modernization or retrofits, use of alternative fuel vehicles and installation of mufflers or other noise reducing equipment.

Action HS-A62: Regulate the location and operation of land uses to avoid or mitigate harmful or nuisance levels of noise to the following sensitive receptors: residentially designated land uses; hospitals, nursing/convalescent homes, and similar board and care facilities; hotels and lodging; schools and day care centers; and neighborhood parks.

Action HS-A64: Require the preparation of a noise analysis/acoustical study, including recommendations for attenuation, for all proposed projects which may result in potentially significant noise impacts to nearby sensitive land uses.

The 2030 Countywide General Plan does not have quantitative standards for maximum allowable noise or vibration levels. Yolo County has adopted the State's land use compatibility guidelines, in which noise levels from 50 to 60 Ldn or CNEL are considered normally acceptable for low density single family, duplex, and mobile homes, and noise levels from 50 to 75 Ldn or CNEL are considered normally acceptable for agricultural land uses.

Off-Channel Surface Mining Ordinance

Title 10, Chapter 4 of the Yolo County Code contains the Off-Channel Surface Mining Ordinance (Mining Ordinance), which provides the following requirements relevant to noise:

Section 10-4.421. Noise: General Standard.

> From 6:00 a.m. to 6:00 p.m., noise levels shall not exceed an average noise level equivalent (Leq) of eighty (80) decibels (dBA) measured at the property boundaries of the site. However, noise levels shall not exceed an average noise level equivalent (Leq) of sixty (60) decibels (dBA) for any nearby off-site residences or other noise-sensitive land uses.
>
> From 6:00 p.m. to 6:00 a.m., noise levels shall not exceed an average noise level equivalent (Leq) of sixty-five (65) decibels (dBA) measured at the property boundaries of the site.
>
> At no time shall noise levels exceed a community noise equivalent (CNEL) of sixty (60) decibels (dBA) for any existing residence or other noise-sensitive land use. An existing residence shall be considered the property line of any residentially zoned area or, in the case of agricultural land, any occupied offsite residential

structures. Achieving the noise standards may involve setbacks, the use of quieter equipment adjacent to residences, the construction of landscaped berms between mining activities and residences, or other appropriate measures.

Section 10-4.422. Noise: Sonic Safety Devices.

If mining occurs within fifteen-hundred (1500) feet of residences, equipment used during nighttime activities shall be equipped with non-sonic warning devices (e.g. infrared) consistent with the California Office of Safety Hazard Administration (Cal OSHA) regulations. This may include fencing of the area to avoid pedestrian traffic, adequate lighting of the area, and placing an observer in clear view of the equipment operator to direct backing operations. If appropriate, prior to commencement of operations without sonic warning devices, operators shall file a variance request with the California OSHA Standards Board showing that the proposed operation would provide equivalent safety to adopted safety procedures, including sonic devices. This regulation applies to all sonic safety devices in use at the mining site, including sonic warnings on conveyors.

Section 10-4.423. Noise: Traffic.

Operators shall provide acoustical analysis for future truck and traffic noise associated with the individual operations along County roadways identified as experiencing significant impacts due to increased traffic noise. The study shall identify noise levels at adjacent noise-sensitive receptors and ways to control the noise to the “normally acceptable” goal of a CNEL of sixty (60) dB and reduce the increase over existing conditions to 5 dB or less. Typical measures that can be employed include the construction of noise barriers (wood or masonry), earthen berms, or re-routing of truck traffic.

4.7.4 IMPACTS AND MITIGATION MEASURES

The following section describes the standards of significance and methodology used to analyze and determine the changes in the proposed project’s potential impacts related to the noise environment. A discussion of the project’s impacts, as well as mitigation measures where necessary, are also presented.

Standards of Significance

The significance criteria used for this analysis were developed from Appendix G of the CEQA Guidelines, and applicable policies and regulations of Yolo County. A noise and/or vibration impact is considered significant if the proposed project would:

a) Generate 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.

b) Generate excessive groundborne vibration or groundborne noise levels.

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

d) Cause a significant environmental impact due to a conflict with applicable plans, policies, or regulations adopted for the purpose of avoiding or mitigating noise impacts.

The standards of significance presented in the 1996 EIR are listed below. For each standard, there is an explanation (*in italics*) describing how the standard from the 1996 EIR is addressed by the updated standards listed above. The 1996 EIR considered that the project would have a significant effect on noise and vibration if it would result in:

- Activities exceeding an exterior noise level (Leq) of 80 dBA between 6 AM and 6 PM, measured at the property site boundary;

  This standard regarding exceedance of noise levels at the site boundary has been updated and is superseded by standards of significance "a" and "d" above.

- Activities exceeding an exterior noise level (Leq) of 65 dBA between 6 PM and 6 AM, measured at the property site boundary;

  This standard regarding exceedance of noise levels at the site boundary has been updated and is superseded by standards of significance "a" and "d" above.

- Exposure of sensitive receptors to long-term noise levels exceeding 60 dB CNEL;

  This standard regarding exposure of sensitive receptors to long-term noise has been updated and is superseded by standards of significance "a" and "d" above.

- An increase in ambient noise levels of:

  - 0-3 decibels (Leq) - not significant
  - 4-5 decibels (Leq) - potentially significant
  - 6 or more decibels (Leq) – significant

  This standard regarding an increase in ambient noise levels has been updated and is superseded by standards of significance "a" and "d" above.

- Vibration or nuisance noise.

  This standard regarding vibration and nuisance noise has been updated and is superseded by standard of significance "b" above.

Impacts Identified in the 1996 EIR

The impacts and mitigation measures adopted in the certified 1996 EIR are identified in Table 4.7-3**.** The table provides a discussion of the status of each mitigation measure.

Table 4.7-3: 1996 EIR Impact Statements, Mitigation Measures, and Discussion

Impact No.	Impact Statement from 1996 EIR	Mitigation Measures/Discussion
4.9-1	The proposed project may result in an increase in ambient noise levels. This is considered to be a significant impact.	Mitigation Measure 4.9-1a/Condition of Approval No. 68[a] requires: "In compliance with Section 10-4.421 (Noise: General Standard) of the Mining Ordinance, daytime noise levels at the property boundary shall not exceed 80 dBA Leq during mining and reclamation of the site. If earth moving operations are conducted at grade within less than 58 feet from the property boundary, the applicant shall ensure that no more than one scraper is used at any one time." Mitigation Measure 4.9-1b/Condition of Approval No. 69[a] requires: "Implement the performance standards included in Section 10-4.421 of the County Off-Channel Surface Mining Ordinance." These mitigation measures will apply to the proposed project and will continue to be implemented.
4.9-2	Project activities may result in exposure of sensitive receptors to increased noise levels. This is considered to be a significant impact.	Mitigation Measure 4.9-1b/Condition of Approval No. 69[a] requires: "Implement the performance standards included in Section 10-4.421 of the County Off-Channel Surface Mining Ordinance." These mitigation measures will apply to the proposed project and will continue to be implemented.
4.9-3	The proposed project may create vibration or nuisance noise on adjoining properties. This is considered to be a significant impact.	Mitigation Measure 4.9-3a/Condition of Approval No. 70[a] requires: "Implement the performance standard included in Section 10-4.422 (Noise: Sonic Safety Devices) of the County Off-Channel Surface Mining Ordinance." These mitigation measures will apply to the proposed project and continue to be implemented for nighttime mining within 1,500 feet of residences.

Source: Baseline Environmental Consulting, 2021.
Notes:
[a] County of Yolo, 2021. Conditions of Approval Mining Permit and Reclamation Plan No. ZF #95-093 CEMEX Mining and Reclamation Project. 2020 Ten-Year Permit Review as modified through February 11, 2021.

Impacts and Mitigation Measures for the Proposed Project

The discussion below examines relevant substantial changes in the project, substantial changes in the circumstances under which the project will be undertaken, and/or new information of

substantial importance, as defined by CEQA Guidelines Section 15162. As necessary, this document updates or expands upon impact discussions in the 1996 EIR to evaluate changes associated with the proposed project and describes whether new or revised mitigation is required.

Pursuant to Section 15162 of the CEQA Guidelines, a subsequent EIR is required where proposed changes in the project or changes in the circumstances of the project would require revisions of the previous EIR due to new significant environmental effects or a substantial increase in the severity of previously identified effects. Additionally, a subsequent EIR is required where there is new information that identifies significant effects not previously discussed, significant effects examined in the prior EIR that will be substantially more severe than previously shown, or mitigation measures or alternatives that are now feasible after previously being found infeasible, or are considerably different from those previously analyzed, that would substantially reduce significant effects but the applicant declines to adopt. Each impact is analyzed to determine whether any of the requirements for a subsequent EIR are met and, if so, additional environmental analysis is provided to evaluate the impacts, mitigation measures, and alternatives, as appropriate.

Impact 4.7-1: 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. The impact would be *less than significant*.

The project proposes to continue mining and reclamation activities, plant operation, and post-reclamation activities as described and evaluated in the 1996 EIR for an additional 20 years. The asphalt and concrete plants located on the project site operate under separate and distinct permits; however, both rely exclusively on aggregate material from the permitted CEMEX operation for which annual and total tonnage (both mined and sold) are controlled through current approvals. Also, the CEMEX conditions of approval and Development Agreement require the plants to cease operation and the plant site to be reclaimed in accordance with the CCAP at the end of the permit period, unless additional mining approvals are subsequently granted by the County, as is requested as a part of the subject application. Noise generated from these existing plants is not anticipated to change under the project and therefore no further noise analysis, specific to these facilities, was conducted as part of this Draft SEIR analysis. Locations for sensitive receptors are the same as described and evaluated in the 1996 EIR.

The only relevant proposed change in operation would be related to a designated stockpiling area including occasional processing of recycled construction material utilizing a portable crusher at the eastern half of Phase 2 area. A portable crusher could generate noise levels of about 83 dBA at 45 feet.[9] The nearest sensitive receptor is located over 3,500 feet away and therefore would not be subjected to adverse noise impacts from this facility as described further below.

The 1996 EIR found that the 1996 project might exceed an exterior noise level of 80 dBA Leq during the day and 65 dBA Leq during the night at the property boundary, which would constitute a significant impact of the project. The 1996 EIR found that implementation of Mitigation Measures

[9] Jeremy Louden Ldn Consulting, Inc., 2011. Noise Assessment, University District Rock Crusher Conditional Use Permit, City of San Marcos. August 11. Table 1, Rock Crushing Reference Noise Levels.

4.9-1a and 4.9-1b, which specified daytime and nighttime maximum noise limits at the project site boundary and nearby receptors, would ensure that potential impacts are mitigated to a level of less than significant. Depending on location, use of the portable crusher to process recycled material (see Figure 3-11) could exceed an exterior noise level of 80 dBA Leq during the day and 65 dBA Leq during the night at the property boundary. Since the project would continue to be required to comply with these measures and the limits in the Mining Ordinance (Section 10-4.421) (and the noise limits were not changed by the CCAP Update), the potential noise impacts related to exceedance of an exterior noise level of 80 dBA Leq during the day or 65 dBA Leq during the night would continue to be less than significant.

The 1996 EIR also found that the 1996 project could expose sensitive receptors to long-term noise levels exceeding 60 dB CNEL. The 1996 EIR found that implementation of Mitigation Measure 4.9-2a would ensure that potential impacts are mitigated to a level of less than significant. The only relevant proposed change in operation would be related to the use of a portable crusher in the eastern portion of the Phase 2 area. A portable crusher could generate noise levels of about 45 dBA at the nearest sensitive receptor, which is located over 3,500 feet away. At this distance, a portable crusher could generate noise levels of about 45 dBA at the nearest sensitive receptor. Therefore, noise from a portable crusher would not expose sensitive receptors to long-term noise levels exceeding 60 dB CNEL. Since the project would continue to be required to comply with this measure (and with Mining Ordinance 10-4.421), the potential noise impacts from other activities of the project related to exposure of sensitive receptors to long-term noise levels exceeding 60 dB CNEL at sensitive receptors would continue to be less than significant.

The 1996 EIR found that increase in ambient noise levels along local roadways would not constitute a significant noise impact. Because the project would not increase hauling trips, the potential noise impacts related to increase in ambient noise levels would continue to be less than significant.

Conclusion

There are no proposed changes in the project that would result in new significant impacts or substantial increase in the severity of previously identified significant impacts, and therefore no revisions to the analysis in the 1996 EIR are required related to this area of impact.

There are no changes in the circumstances under which the project would be undertaken that would result in new significant impacts or substantial increase in the severity of previously identified significant impacts, and therefore no revisions to the analysis in the 1996 EIR are required related to this area of impact.

There is no new important information relevant to this area of impact that was not previously known at the time of the 1996 EIR. There are no related new significant impacts, more substantial increase in the severity of previously identified significant impacts, previously dismissed mitigation that is now feasible, previously dismissed alternatives that are now feasible, or different more effective alternatives that have emerged or become known.

Mitigation Measure(s)

None required.

Impact 4.7-2: Generation of excessive groundborne vibration or groundborne noise levels. The impact would be *less than significant*.

The project proposes to continue for mining and reclamation activities as described and evaluated in the 1996 EIR for an additional 20 years. Locations for sensitive receptors are the same as described and evaluated in the 1996 EIR.

The 1996 EIR found that the 1996 project would not generate excessive vibration and found the potential impacts from vibration to be less than significant without mitigation. Since the project would not substantially increase or change the type of equipment being used, the potential impacts related to generation of excessive groundborne vibration or groundborne noise levels would continue to be less than significant.

Conclusion

There are no proposed changes in the project that would result in new significant impacts or substantial increase in the severity of previously identified significant impacts, and therefore no revisions to the analysis in the 1996 EIR are required related to this area of impact.

There are no changes in the circumstances under which the project would be undertaken that would result in new significant impacts or substantial increase in the severity of previously identified significant impacts, and therefore no revisions to the analysis in the 1996 EIR are required related to this area of impact.

There is no new important information relevant to this area of impact that was not previously known at the time of the 1996 EIR. There are no related new significant impacts, more substantial increase in the severity of previously identified significant impacts, previously dismissed mitigation that is now feasible, previously dismissed alternatives that are now feasible, or different more effective alternatives that have emerged or become known.

Mitigation Measure(s)

None required.

Impact 4.7-3: 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, expose people residing or working in the project area to excessive noise levels. The impact would be *less than significant*.

The Watts-Woodland Airport is the nearest public airport, a portion of which is located within the southeastern portion of the CCAP area. Because the project would not introduce new people to the project area, the proposed project would not expose people to excessive noise levels. This impact is less than significant.

Conclusion

There are no proposed changes in the project that would result in new significant impacts or substantial increase in the severity of previously identified significant impacts, and therefore no revisions to the analysis in the 1996 EIR are required related to this area of impact.

There are no changes in the circumstances under which the project would be undertaken that would result in new significant impacts or substantial increase in the severity of previously identified significant impacts, and therefore no revisions to the analysis in the 1996 EIR are required related to this area of impact.

There is no new important information relevant to this area of impact that was not previously known at the time of the 1996 EIR. There are no related new significant impacts, more substantial increase in the severity of previously identified significant impacts, previously dismissed mitigation that is now feasible, previously dismissed alternatives that are now feasible, or different more effective alternatives that have emerged or become known.

Mitigation Measure(s)

None required.

Impact 4.7-4: Cause a significant environmental impact due to a conflict with applicable plans, policies, or regulations adopted for the purpose of avoiding or mitigating noise impacts. The impact would be *less than significant*.

In general, the project proposes to continue mining and reclamation activities, plant operation, and post-reclamation activities as described and evaluated in the 1996 EIR for an additional 20 years. Potential impacts related to noise and vibration would be substantially similar under the proposed project and the conditions evaluated in the 1996 EIR and would remain less than significant. The 1996 EIR found that the 1996 project was consistent with applicable plans, policies, and regulations.

Table 4.7-4 below provides an analysis of the proposed project's consistency with applicable policies and regulations that have been adopted for the purpose of avoiding or mitigating environmental effects related to noise. No proposed project modifications (relative to the 1996 project) have been identified that would result in inconsistency with applicable plans, policies, and regulations. As the proposed project is substantially similar to the 1996 project from a noise and vibration perspective, the project would also be consistent with applicable plans, policies, and regulations.

Conclusion

There are no proposed changes in the project that would result in new significant impacts or substantial increase in the severity of previously identified significant impacts, and therefore no revisions to the analysis in the 1996 EIR are required related to this area of impact.

There are no changes in the circumstances under which the project would be undertaken that would result in new significant impacts or substantial increase in the severity of previously

identified significant impacts, and therefore no revisions to the analysis in the 1996 EIR are required related to this area of impact.

There is no new important information relevant to this area of impact that was not previously known at the time of the 1996 EIR. There are no related new significant impacts, more substantial increase in the severity of previously identified significant impacts, previously dismissed mitigation that is now feasible, previously dismissed alternatives that are now feasible, or different more effective alternatives that have emerged or become known.

Mitigation Measure(s)

None required.

Table 4.7-4: Consistency with Applicable Plans, Policies, and Regulations

Policy/Regulation	Consistency Discussion
Yolo County General Plan	
Policy HS-7.1 Ensure that existing and planned land uses are compatible with the current and projected noise environment. However, urban development generally experiences greater ambient (background) noise than rural areas. Increased density, as supported by the County in this General Plan, generally results in even greater ambient noise levels. It is the County's intent to meet specified indoor noise thresholds, and to create peaceful backyard living spaces where possible, but particular ambient outdoor thresholds may not always be achievable. Where residential growth is allowed pursuant to this general plan, these greater noise levels are acknowledged and accepted, notwithstanding the guidelines in Figure HS-7 [of the General Plan].	See Impact 4.7-1. The 1996 EIR found that increase in ambient noise levels along local roadways would not constitute a significant noise impact. Because the project would not increase hauling trips, the potential noise impacts related to increase in ambient noise levels would continue to be less than significant, and the project would be consistent with this policy.
Policy HS-7.3 Protect important agricultural, commercial, industrial, and transportation uses from encroachment by land uses sensitive to noise and air quality impacts.	Given that the proposed project is consistent with the CCAP, and would not introduce new sensitive receptors to the project area, the project would be consistent with this policy.
Policy HS-7.5 Minimize the impact of noise from transportation sources including roads, rail lines, and airports on nearby sensitive land uses.	See discussion of compatibility with Policy HS-7.1 above.
Policy HS-7.8 Encourage local businesses to reduce vehicle and equipment noise through fleet and equipment modernization and retrofits, use of alternative fuel vehicles, and installation of mufflers or other noise reducing equipment.	See Impact 4.10-1. Noise levels occurring as a result of the proposed project would not conflict with applicable General Plan standards. Therefore, the project would be consistent with this policy.
Action HS-A62 Regulate the location and operation of land uses to avoid or mitigate harmful or nuisance levels of noise to the following sensitive receptors: residentially designated land uses; hospitals, nursing/convalescent homes, and similar board	See Impact 4.10-1. Implementation of the project would not result in significant noise level increases at the nearest receptors. Therefore, the project would be consistent with this policy.

and care facilities; hotels and lodging; schools and day care centers; and neighborhood parks. Home occupation uses are excluded.	
Off-Channel Mining Plan	
None applicable.	
Off-Channel Surface Mining Ordinance	
Section 10-4.421 From 6:00 a.m. to 6:00 p.m., noise levels shall not exceed an average noise level equivalent (Leq) of eighty (80) decibels (dBA) measured at the property boundaries of the site. However, noise levels shall not exceed an average noise level equivalent (Leq) of sixty (60) decibels (dBA) for any nearby off-site residences or other noise-sensitive land uses. From 6:00 p.m. to 6:00 a.m., noise levels shall not exceed an average noise level equivalent (Leq) of sixty-five (65) decibels (dBA) measured at the property boundaries of the site. At no time shall noise levels exceed a community noise equivalent (CNEL) of sixty (60) decibels (dBA) for any existing residence or other noise sensitive land use. An existing residence shall be considered the property line of any residentially zoned area or, in the case of agricultural land, any occupied offsite residential structures. Achieving the noise standards may involve setbacks, the use of quieter equipment adjacent to residences, the construction of landscaped berms between mining activities and residences, or other appropriate measures. (§ 1, Ord. 1190, eff. September 5, 1996)	See Impact 4.10-1. At the project site boundaries, the proposed project would not conflict with the 80 dB Leq standard established by the Mining Ordinance. The 1996 EIR found that implementation of Mitigation Measures 4.9-1a and 4.9-1b, which specified daytime and nighttime maximum noise limits at the project site boundary and nearby receptors, would ensure that potential impacts are mitigated to a level of less than significant. Continued implementation of 1996 EIR Mitigation Measures would ensure that project noise levels at the existing residential receptors in the project vicinity would comply with the 60 dB Leq noise threshold established by Mining Ordinance Section 10-4.421. Therefore, the project would be consistent with this regulation.
Section 10-4.422 If mining occurs within fifteen-hundred (1500) feet of residences, equipment used during nighttime activities shall be equipped with non-sonic warning devices (e.g. infrared) consistent with the California Office of Safety Hazard Administration (Cal OSHA) regulations. This may include fencing of the area to avoid pedestrian traffic, adequate lighting of the area, and placing an observer in clear view of the equipment operator to direct backing operations. If appropriate, prior to commencement of operations without sonic warning devices, operators shall file a variance request with the California OSHA Standards Board showing that the proposed operation would provide equivalent safety to adopted safety procedures, including sonic devices. This regulation applies to all sonic safety devices in use at the mining site, including sonic warnings on conveyors.	No mining currently occurs within 1,500 feet of a residence. Under the proposed project, mining would occur within 1,500 feet of a residence during mining of Phase 6. Per the proposed project mining plan, CEMEX will retrofit its equipment with non-sonic warning devices prior to mining during nighttime hours within 1,500 feet of the residence to the east of Phase 6. Therefore, the project would be consistent with this regulation.
Section 10-4.423 Operators shall provide acoustical analysis for future truck and traffic noise associated with the individual operations along County roadways identified as experiencing significant impacts due to increased traffic noise. The study shall identify noise levels at adjacent noise sensitive receptors	See discussion of compatibility with Policy HS-7.1 above.

and ways to control the noise to the "normally acceptable" goal of a Ldn of sixty (60) dB and reduce the increase over existing conditions to five (5) dBA or less. Typical measures that can be employed include the construction of noise barriers (wood or masonry), earthen berms, or re-routing of truck traffic.	
Reclamation Ordinance	
None applicable	

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