6 ALTERNATIVES

In accordance with CEQA and the CEQA Guidelines (Section 15126.6), an EIR must describe a range of reasonable alternatives to the project, or to the location of the project, that would "feasibly attain most of the project's basic objectives, while avoiding or substantially lessening any of the significantly adverse environmental effects of the project." An EIR need not consider every conceivable alternative to a project; rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. The range of alternatives required in an EIR is governed by a "rule of reason" that requires an EIR to set forth only those alternatives necessary to permit a reasoned choice, even if those alternatives "impede to some degree the attainment of the project objectives or would be more costly." Specifically, the CEQA Guidelines set forth the following criteria for selecting alternatives:

- The discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives or would be more costly. (Section 15126.6[b]);

- The range of potential alternatives shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. (Section 15126.6[c]);

- The specific alternative of "no project" shall also be evaluated along with its impact. (Section 15126.6[e][1]);

- The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, an EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision-making. (Section 15126.6[f]); and

- "[I]n some cases there may be no feasible alternative locations for a … mining project which must be in close proximity to natural resources at a given location." (Section 15126.6[f][2][b]).

6.1 INTRODUCTION

The proposal would amend the approved mining and reclamation permits to: 1) extend the term of the permit approvals by 20 years; 2) allow mining of more total tonnage (22.3 million additional tons mined; 20.0 million additional tons sold); 3) increase the allowed acreage of simultaneous disturbance; 4) increase the allowed area for processing activities; 5) allow reclamation in certain phases to occur later and to allow overall reclamation to occur later; 6) remove Phase 7 from the operation; 7) address inconsistencies in approved plans verses on-the-ground conditions; 8) modify phase boundaries; 9) modify reclamation plans to reclaim more area and modify reclamation end uses to decrease the area of reclaimed agriculture and increase the area of

reclaimed lake; 10) increase the area of reclaimed habitat; and 11) modify other approvals to be consistent with the request. A complete description of the project is contained in Chapter 3.0, Project Description.

6.2 PROJECT OBJECTIVES AND IMPACTS

This section identifies the nine project objectives and restates the project's significant impact statements.

6.2.1 Project Objectives

Project objectives are identified in Chapter 3.0, Project Description. To assist in evaluating project alternatives, the proposed project's objectives are repeated below.

- To continue extraction of sand and gravel resources at the approved annual rate of production for the processing and sale of aggregate products through 2047.
- To maximize the extraction of the remaining available sand and gravel resources located within the permitted mining footprint.
- To increase total tons sold over the 20-year extended life of the permit by 20 million tons.
- To continue to supply an economic and reliable source of construction materials to the Yolo County market, utilizing the existing aggregate processing facility, conveyor system and associated infrastructure.
- To establish a new settling pond for deposition of process fines.
- To use the eastern 31.9 acres of the existing Phase 2 area as an extension of the existing processing plant site for purposes of product stockpiling and construction materials recycling.
- To implement the proposed reclamation plan to establish end uses of agriculture, permanent lakes, and wildlife habitat in accordance with the Surface Mining and Reclamation Act (PRC 2710, et seq.) and CCAP.
- To continue to employ approximately 15 mining and processing personnel at the site.
- To resolve outstanding operational concerns identified by the County.

6.2.2 Approach

The purpose of this discussion of alternatives to the project is to enable County decision-makers to consider how alternatives to the project as proposed might reduce or avoid the project's impacts on the physical environment. The summary below categorizes impact conclusions based on level of significance and identification of new mitigation measures. The analysis of alternatives below examines whether implementation of the alternatives would result in different conclusions than those reached for the proposed project in the various areas of potential impact, focusing in

particular, on whether significant and unavoidable impacts could be lessened or avoided with any alternative.

This Draft SEIR supports the conclusions that the following potential effects of project implementation would have no impact or be less than significant impacts without the need for new mitigation measures for the following topics:

- aesthetics and visual resources (Section 4.9 and Impact 5.1)
- agricultural resources (Impacts 4.1-2, 4.1-3, and 4.1-4)
- air quality (Impacts 4.2-1, 4.2-2, 4.2-3, 4.2-3, 4.2-6, 4.2-9, and 5-3)
- biological resources (Impacts 4.3-2, 4.3-3, 4.3-5, and 4.3-8)
- cultural resources (Impacts 4.4-3, and 4.4-6)
- energy (Impacts 4.2-7, 4.2-8, and 5-5)
- forestry resources (Section 4.1)
- geological resources (Impacts 4.5-1, 4.5-2, 4.5-3, 4.5-4, 4.5-6, 4.5-7, and 4.5-8)
- hazards and hazardous materials (Section 4.9 and Impact 5-9)
- hydrology and water quality (Impacts 4.6-1, 4.6-2, 4.6-3, 4.6-4, and 4.6-5)
- land use and planning (Section 4.9 and Impact 5-11)
- noise and vibration (Impacts 4.7-1, 4.7-2, 4.7-3, 4.7-4, and 5-12)
- population and housing (Section 4.9)
- public services and recreation (Section 4.9 and Impact 5-13)
- transportation and circulation (Impacts 4.8-2 and 4.8-3)
- utilities and service systems (Section 4.9 and Impact 5-13)
- wildfire (Section 4.9)

This Draft SEIR substantiates that the following potential effects of project implementation would be less-than-significant with implementation of identified new mitigation measures:

- increase in GHG emissions (Impact 4.2-5)
- impacts to special status species (Impact 4.3-1)

- impacts to wildlife movement and corridors (Impact 4.3-4)
- degrade the quality of the environment (Impact 4.3-6)
- conflict with local policies protecting biological resources (Impact 4.3-7)
- impacts to historical resources (Impacts 4.4-1)
- impacts to unique archeological resources (Impact 4.4-2)
- impacts to Tribal Cultural Resources (Impact 4.4-4)
- impacts to examples of major periods of history (Impact 4.4-5)
- impacts to paleontological resources (Impact 4.5-5)
- conflict with plans related to hydrology and water quality (Impact 4.6-6)
- conflict with local policies related to LOS for specified intersections (Impact 4.8-4)
- cumulative greenhouse gas emissions (Impact 5-4)
- cumulative impacts to biological resources (Impact 5-6)
- cumulative impacts to cultural and Tribal Cultural Resources (Impact 5-7)
- cumulative impacts to geology and paleontological resources (Impact 5-8)
- cumulative impacts related to hydrology and water quality (Impact 5-10)

The Draft SEIR supports the conclusion that impacts restated below related to loss of farmland and increases in VMT would be significant and unavoidable:

- Impact 4.1-1: Implementation of the proposed project would have the potential to convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. The impact would be significant and unavoidable.
- Impact 4.8-1: Cause an increase in baseline total VMT. The impact would be significant and unavoidable.
- Cumulative Impact 5-2: Cumulative impacts to farmland. The project's incremental contribution to cumulative farmland impacts is cumulatively considerable.
- Cumulative Impact 5-14: Cumulative impacts to transportation and circulation (net increase in VMT). The project's incremental contribution to increases in VMT is

cumulatively considerable.

6.3 SELECTION AND ANALYSIS OF ALTERNATIVES

The 1996 EIR considered five project-level alternatives:

- 1996 Alternative 1: No Project
- 1996 Alternative 2a: Shallow Mining (Expanded Area)
- 1996 Alternative 2b: Shallow Mining (Decreased Volume)
- 1996 Alternative 3a: Decreased Mining (Limited Extraction Rate)
- 1996 Alternative 3b: Decreased Mining (Limited Extraction Period)

The No Project Alternative assumed mining and reclamation activities under the "short-term" (five-year) mining permit held by the former operator (Solano Concrete) would be completed, and the existing vested plant facilities would continue to operate, processing aggregate from an unknown off-site source. The two shallow mining alternatives were found to be more impactful including increased loss of farmland, and economically infeasible. These alternatives did not meet the objectives of the project and were inconsistent with the CCAP objective of encouraging deeper mining within a smaller footprint. The two decreased mining alternatives were found to be inconsistent with the objectives of the project and therefore economically infeasible.

Based on consideration of the alternatives previously evaluated in the 1996 EIR, current site conditions, CCAP objectives, and the requirements of CEQA, the following alternatives to the proposed project are evaluated in this Draft SEIR:

- Alternative 1A, No Project Alternative – This alternative assumes the project is not modified as proposed, no permit extension is granted, and the current reclamation plan would stay in place. The current approvals would expire August 11, 2027. There would be no change in total mined tonnage.
- Alternative 1B, No Project Alternative, Compliance Concerns Corrected – This alternative assumes the project is not modified as proposed, no permit extension is granted, and the current reclamation plan would stay in place. The current approvals would expire August 11, 2027. There would be no change in total mined tonnage. This alternative does assume however, that modifications to the mining and reclamation plans are made to satisfy outstanding compliance concerns.

These modifications include: changes to the mining and reclamation plans to incorporate areas that were overmined and encroachments within the 200-foot Cache Creek setback; design and implementation of expanded hedgerows along the north boundary of the west half of Phase 1 and the entire west boundary between Phase 1 and Phase 2; resolution of temporary impacts to croplands in excess of the maximum 126 acres of disturbance assumed in the 1996 EIR; corrections to phasing numbering and order; corrections to lot lines; and modifications to fully

comport all approvals over the years to one conformed set of mining and reclamation plans, reclamation narrative, and Habitat Restoration Plan (HRP).

- Alternative 2, Shorter Permit Extension – This alternative assumes all proposed modifications to the project, except the permit extension is limited to 10 years, which is one half the requested period. Annual mined tonnage, mining footprint, and all other approved components of the project would continue. Total additional mining tonnage would be 10,668,263 tons mined (9,968,060 tons sold) which is 50 percent less than the requested amount.

- Alternative 3, Limited Mining During Extended Period – This alternative assumes the annual cap on extraction (1,204,819 tons mined; 1,000,000 tons sold) is reduced by 50 percent to 602,410 tons mined and 500,000 tons sold for the requested permit extension period (2027 to 2047). The approved 20 Percent Exceedance would continue which would allow a maximum of up to 722,892 tons mined and 600,000 tons sold in any given year.

These alternatives represent a reasonable range of potential alternatives to the proposed project that could potentially reduce or avoid environmental impacts identified in this Draft SEIR. Table 6-1 provides a comparison of key features of the project and alternatives.

Table 6-1: Comparison of Project and Alternatives

Alt #	Alt Name	Permit Expiration	Annual Tons Mined[1]	Total Tons Mined	Phases	Key Differences
	Proposed Project	2047	1,149,425	53.54 mil	6	See Chapter 3.0
1A	No Project, Approved Operation Continues	2027	1,204,819	32.17 mil	7	Same as approved project
1B	No Project, Compliance Concerns Corrected	2027	1,204,819	32.17 mil	7	Approved project with compliance corrections
2	Shorter Permit Extension	2037	1,149,425	42.84 mil	6	Same as proposed project for ten more years
3	Limited Mining During Extended Period	2047	602,410	42.84 mil	6	Half annual tonnage of proposed project for 20 more years

Notes:
[1] Does not include approved 20 Percent Exceedance

6.4 ALTERNATIVES ANALYSIS

Each of the project alternatives is described in detail below, with a corresponding analysis of each alternative's consistency with the project objectives and evaluation of impacts to the existing

environment in comparison to the proposed project's identified impacts. While an effort has been made to include quantitative data for certain topics where possible, qualitative comparisons of the various alternatives to the project are primarily provided. Such an approach to the analysis is appropriate as evidenced by CEQA Guidelines Section 15126.6(d), which states that the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed. The analysis evaluates impacts that would occur with the alternatives relative to the significant impacts identified for the proposed project. When comparing the potential impacts resulting from implementation of the foregoing alternatives, the following terminology is used:

- "Fewer" = Reduced or lower as compared to the proposed project;
- "Similar" = Similar or equivalent to the proposed project; and
- "Greater" = Increased or more than proposed project.

When the term "fewer" is used, the reader should not necessarily equate this to elimination of significant impacts identified for the proposed project. For example, an alternative may reduce the relative intensity of a significant impact identified for the proposed project, but the impact might still be expected to remain significant under the alternative, thereby requiring mitigation. In other cases, the use of the term "fewer" may mean the actual elimination of an impact identified for the proposed project altogether. Similarly, use of the term "greater" does not necessarily imply that an alternative would require additional mitigation beyond what has been required for the proposed project. These nuances are described where relevant in the subsequent assessments.

See Table 6-1 at the end of this chapter for a comparison of the environmental impacts resulting from the considered alternatives and the proposed project.

6.4.1 Alternative 1A, No Project Alternative

CEQA requires the evaluation of the comparative impacts of the "No Project" alternative (CEQA Guidelines Section 15126.6[e]). Analysis of the no project alternative shall:

> "… discuss […] existing conditions […] as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services." (Id., subd. [e][2]) "If the project is other than a land use or regulatory plan, for example a development project on identifiable property, the 'no project' alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in the property's existing state versus environmental effects that would occur if the project were approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this 'no project' consequence should be discussed. In certain instances, the no project alternative means 'no build,' wherein the existing environmental setting is maintained. However, where failure to proceed with the project would not result in preservation of existing environmental conditions, the analysis should identify the

practical result of the project's non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment." (Id., subd. [e][3][B]).

Principal Characteristics

This alternative assumes the project is not modified as proposed and no permit extension is granted. The current approvals would expire August 11, 2027. There would be no change in permitted maximum total mined tonnage. Under this alternative, mining, processing, and mixing of concrete and asphalt materials would cease at the site in 2027. Reclamation would proceed as described in the current approved reclamation plan.

Because local construction activities and the regional market demand a certain quantity of these aggregate resources, it is likely that the demand would be filled by another local aggregate supplier, or the materials would be imported from outside the area. The reduced supply might also result in higher prices. Furthermore, under this alternative the applicant would not be precluded from seeking subsequent approvals to conduct further mining and aggregate processing at the project site or at other planned mining (SGRO zoned) sites within the CCAP plan area.

Consistency with Project Objectives

The No Project Alternative does not meet any of the project objectives. In addition, the operator has indicated that the proposed reclamation under Alternative 1A could not be fully implemented during the original permit term because the salvage of soil resources from the entire footprint of all mining phases would be required to complete the planned reclamation to agriculture, and mining has not progressed as fast as originally anticipated.

Impacts of Alternative

The following evaluates the impacts of this alternative on baseline conditions as compared to the impacts of the proposed project on baseline conditions for each impact area addressed within this Draft SEIR.

Aesthetics and Visual Resources

Under the No Project Alternative, mining operations at the project site would continue until 2027 and reclamation would be completed thereafter (sooner than would occur under the proposed project). Post reclamation uses would include open water lake, habitat, and agriculture based on the approved reclamation for the site, and after reclamation is complete, would no longer contribute to significant cumulative aesthetic impacts identified in the CCAP Update EIR. Therefore, this alternative could result in fewer impacts related solely to aesthetic effects at the site. However, to the extent this alternative results in new mining elsewhere inside or outside of the CCAP area, aesthetic and visual impacts could increase.

Agricultural and Forestry Resources

The proposed project does not propose mining outside mining boundaries approved in the 1996 EIR (i.e., the area to be mined is similar under the proposed project and the No Project

Alternative). Therefore, the potential for soil disturbance and impacts to farmland resources under the No Project Alternative and the proposed project are similar. However, because the existing approved reclamation plan would result in 57 acres more of reclaimed farmland, impacts to agriculture would be less under this Alternative.

Air Quality, Greenhouse Gases, and Energy

Under the No Project Alternative, mining operations at the CEMEX site would cease after 2027, and emissions of criteria pollutants and greenhouse gases associated with mining and processing aggregate at the site would cease locally thus resulting in fewer direct GHG emissions. However, the product demand is likely to be met by another mining facility (local or out of the area). Therefore, combined direct and indirect GHG emissions are likely to result in similar impacts as compared to the proposed project.

Biological Resources

The area to be mined and reclaimed under the proposed project would not substantially change from the approved project. The reclamation area boundary will increase by about 100 acres reflecting the incorporation of all areas to be reclaimed into the permit plan sheets. Reclamation in these areas is required; however, they were not included in the approved reclamation plan sheets. The proposed reclaimed lakes will be further separated from the creek corridor, however, the proposed modifications to the HRP, including identified mitigation measures, will result in improved biological outcomes, particularly north of the plant site. Impacts to biological resources generally would be similar to those that would result from the proposed project; however, as proposed reclamation of a majority of the site would occur much sooner under this alternative, impacts overall would be decreased as a result of the shorter period of disturbance and smaller total area of disturbance at any one time.

Cultural Resources and Tribal Cultural Resources

The proposed project does not propose mining outside mining boundaries approved in the 1996 EIR (i.e., the area to be mined is similar under the proposed project and Alternative 1B). Therefore, the potential for soil disturbance and impacts to cultural resources under this Alternative and the proposed project are similar.

Geology and Soils, Mineral Resources, and Paleontological Resources

Under the No Project Alternative, mining operations at the site would continue until closure in 2027 and reclamation of the mining areas would occur thereafter. Reclamation of the site in 2027 would effectively preclude continued mining of a known mineral resource of value to the region. Reclamation to agriculture, habitat, and open space lake features overlying existing unmined mineral resources would effectively preclude future mining of those resources, particularly if special status species and habitat result. Failure to mine the known feasibly available resource could also result in pressures to open new mining elsewhere.

Impacts related to slope stability would be similar because reclaimed slopes would be subject to compliance with Mining Ordinance Section 10-4.431 and Reclamation Ordinance Section 10-5.504, which require slope stability analyses to demonstrate that slopes will be stable. The potential to unearth paleontological resources may be reduced because the total amount of

material mined at the site (materials that could contain paleontological resources) under this Alternative would be reduced. Therefore, this alternative could result in greater impacts related to conflict with the County CCAP, but fewer impacts related to potential paleontological impacts at the project site.

Hydrology and Water Quality

Under the No Project Alternative, mining operations at the site would continue until closure in 2027 and reclamation of the mining areas would occur thereafter. Impacts related to hydrology and water quality (e.g., methylmercury in wet pit lakes, etc.) would be similar because the operator would be subject to compliance with all mining and reclamation ordinance requirements related to water quality protection under both the No Project Alternative and the proposed project. As assessed in Impact 4.6-1, proposed changes in the configuration of the reclaimed lakes would have no substantive adverse effect on methylmercury considerations and backfilling of Phase 3-4 lakes may be beneficial in light of preliminary mercury monitoring results. Therefore, hydrology and water quality impacts under this alternative would be similar.

Noise

Mining and processing activities and associated noise impacts would be similar to the proposed project until 2027, at which time they would cease. Noise generation and potential less-than-significant impacts related to noise at nearby receptors would be decreased between 2027 and 2047, compared to the proposed project. However, the product demand is likely to be met by another mining facility (local or out of the area). Therefore, noise associated with mining may occur elsewhere.

Transportation and Circulation

This alternative would be similar to the proposed project with respect to transportation and circulation impacts until 2027, at which time mining would cease under Alternative 1A. As detailed in Impact 4.8-1 of this Draft SEIR, the proposed project would extend mining and aggregate production at the site for 20 years (2027 to 2047) and associated truck traffic could contribute to a significant VMT impact on the public roadway network. Under the No Project alternative, aggregate production at the site would cease after 2027 and the contribution to the future VMT impact would be reduced. Therefore, this alternative would result in fewer impacts on the project site as compared to the proposed project. However, the product demand is likely to be met by another mining facility (local or out of the area). Therefore, VMT associated with mining may occur elsewhere.

6.4.2 Alternative 1B, No Project Alternative, Compliance Concerns Corrected Alternative

Principal Characteristics

This alternative assumes the project is not modified as proposed, no permit extension is granted, and the current reclamation plan would stay in place. The current approvals would expire August 11, 2027. There would be no change in total mined tonnage. Under this alternative, mining, processing, and mixing of concrete and asphalt materials would cease at the site in 2027. Reclamation would proceed as described in the current approved reclamation plan. Because local

construction activities and the regional market demand a certain quantity of these aggregate resources, it is likely that the demand would be filled by another local aggregate supplier, or the materials would be imported from outside the area. Furthermore, under this alternative the applicant would not be precluded from seeking subsequent approvals to conduct further mining and aggregate processing at the project site or at other planned mining (SGRO zoned) sites within the CCAP plan area.

This alternative assumes that modifications to the mining and reclamation plans are made to satisfy outstanding compliance concerns. These modifications include: changes to the mining and reclamation plans to incorporate areas that were overmined and encroachments within the 200-foot Cache Creek setback; design and implementation of expanded hedgerows along the north boundary of the west half of Phase 1 and the entire west boundary between Phase 1 and Phase 2; resolution of temporary impacts to croplands in excess of the maximum 126 acres of disturbance assumed in the 1996 EIR; corrections to phasing numbering and order; corrections to lot lines; and modifications to fully comport all approvals over the years to one conformed set of mining and reclamation plans, reclamation narrative, and HRP.

Consistency with Project Objectives

The No Project Alternative (1B) Compliance Concerns Corrected Alternative meets the following project objective:

- To resolve outstanding operational concerns identified by the County.

Alternative 1B does not meet any of the remaining project objectives. In addition, the operator has indicated that the proposed reclamation under Alternative 1B could not be fully implemented during the original permit term because the salvage of soil resources from the entire footprint of all mining phases would be required to complete the planned reclamation to agriculture, and mining has not progressed as fast as originally anticipated.

Impacts of the Alternative

The following evaluates the impacts of this alternative on baseline conditions as compared to the impacts of the proposed project on baseline conditions for each impact area addressed within this Draft SEIR.

Aesthetics and Visual Resources

Under Alternative 1B, mining operations at the project site would continue until 2027 and reclamation would be completed thereafter (sooner than would occur under the proposed project). Post reclamation uses would include open water lake, habitat, and agriculture based on the approved reclamation for the site, and after reclamation is complete, would no longer contribute to significant cumulative aesthetic impacts identified in the CCAP Update EIR. Therefore, this alternative could result in fewer impacts related solely to aesthetic effects at the site. However, to the extent this alternative results in new mining elsewhere inside or outside of the CCAP area, aesthetic and visual impacts would increase. However, to the extent this alternative results in new mining elsewhere inside or outside of the CCAP area, aesthetic and visual impacts could increase.

Agricultural and Forestry Resources

The proposed project does not propose mining outside mining boundaries approved in the 1996 EIR (i.e., the area to be mined is similar under the proposed project and Alternative 1B). Therefore, the potential for soil disturbance and impacts to farmland resources under this Alternative and the proposed project are similar. However, because the existing approved reclamation plan would result in 57 acres more of reclaimed farmland, impacts to agricultural would be less under this Alternative.

Air Quality, Greenhouse Gases, and Energy

Under Alternative 1B, mining operations at the CEMEX site would cease after 2027, and emissions of criteria pollutants and greenhouse gases associated with mining and processing aggregate at the site would cease locally thus resulting in fewer direct GHG emissions. However, the product demand is likely to be met by another mining facility (local or out of the area). Therefore, combined direct and indirect GHG emissions are likely to result in similar impacts as compared to the proposed project.

Biological Resources

The area to be mined and reclaimed under the proposed project would not substantially change from the approved project. The reclamation area boundary will increase by about 100 acres reflecting the incorporation of all areas to be reclaimed into the permit plan sheets. Reclamation in these areas is required; however, they were not included in the approved reclamation plan sheets. The proposed reclaimed lakes will be further separated from the creek corridor; however, the proposed modifications to the HRP, including identified mitigation measures, will result in improved biological outcomes, particularly north of the plant site. Impacts to biological resources generally would be similar to those that would result from the proposed project; however, as proposed reclamation of a majority of the site would occur much sooner under this alternative, impacts overall would be decreased as a result of the shorter period of disturbance and smaller total area of disturbance at any one time.

Cultural Resources and Tribal Cultural Resources

The proposed project does not propose mining outside mining boundaries approved in the 1996 EIR (i.e., the area to be mined is similar under the proposed project and the No Project Alternative, Compliance Concerns Corrected). Therefore, the potential for soil disturbance and impacts to cultural resources under the No Project Alternative, Compliance Concerns Corrected and the proposed project are similar.

Geology and Soils, Mineral Resources, and Paleontological Resources

Under Alternative 1B, mining operations at the site would continue until closure in 2027 and reclamation of the mining areas would occur thereafter. Reclamation of the site in 2027 would effectively preclude continued mining of a known mineral resource of value to the region. Reclamation to agriculture, habitat, and open space lake features overlying existing unmined mineral resources would effectively preclude future mining of those resources, particularly if special status species and habitat result. Failure to mine the known feasibly available resource could also result in pressures to open new mining elsewhere.

Impacts related to slope stability would be similar because reclaimed slopes would be subject to compliance with Mining Ordinance Section 10-4.431 and Reclamation Ordinance Section 10-5.504, which require slope stability analyses to demonstrate that slopes will be stable. The potential to unearth paleontological resources may be reduced because the total amount of material mined at the site (materials that could contain paleontological resources) under this Alternative would be reduced. Therefore, this alternative could result in greater impacts related to conflict with the County CCAP, but fewer impacts related to potential paleontological impacts at the project site.

Hydrology and Water Quality

Under Alternative 1B, mining operations at the site would continue until closure in 2027 and reclamation of the mining areas would occur thereafter. Impacts related to hydrology and water quality (e.g., methylmercury in wet pit lakes, etc.) would be similar because the operator would be subject to compliance with all mining and reclamation ordinance requirements related to water quality protection under this Alternative and the proposed project. As assessed in Impact 4.6-1, proposed changes in the configuration of the reclaimed lakes would have no substantive adverse effect on methylmercury considerations and backfilling of Phase 3-4 lakes may be beneficial in light of preliminary mercury monitoring results. Therefore, hydrology and water quality impacts under this alternative would be similar.

Noise

Mining and processing activities, and associated noise impacts would be similar to the proposed project until 2027, at which time they would cease. Noise generation and potential less-than-significant impacts related to noise at nearby receptors would be decreased between 2027 and 2047, compared to the proposed project. However, the product demand is likely to be met by another mining facility (local or out of the area). Therefore, noise associated with mining may occur elsewhere.

Transportation and Circulation

This alternative would be similar to the proposed Project with respect to transportation and circulation impacts until 2027, at which time mining would cease under Alternative 1B. As detailed in Impact 4.8-1 of this Draft SEIR, the proposed project would extend mining and aggregate production at the site for 20 years (2027 to 2047) and associated truck traffic could contribute to a significant VMT impact on the public roadway network. Under Alternative 1B, aggregate production at the site would cease after 2027 and the contribution to the future VMT impact would be reduced. However, the product demand is likely to be met by another mining facility (local or out of the area). Therefore, VMT associated with mining may occur elsewhere.

6.4.3 Alternative 2, Shorter Permit Extension

Principal Characteristics

This alternative is identical to the proposed project, except the permit extension is limited to 10 years (through 2037) which is half of the requested period. Annual mined tonnage, mining footprint, and all other components of the project would be the same. Total additional mining

tonnage would be 10,668,263 tons mined (9,968,060 tons sold) which is 50 percent less than the requested amount.

Consistency with Project Objectives

Alternative 2 generally meets four of the nine project objectives and partially meets two of them:

- To continue to supply an economic and reliable source of construction materials to the Yolo County market, leveraging the existing aggregate processing facility, conveyor system and associated infrastructure. (Partially achieved with this Alternative.)

- To modify mining phases to allow an electric dredge to efficiently move between mining phases without the need to disassemble and reassemble the dredge equipment and establish a new settling pond for deposition of process fines.

- To use the eastern 31.9 acres of the existing Phase 2 area as an extension of the existing processing plant site for purposes of product stockpiling and construction materials recycling.

- To implement the proposed reclamation plan to establish end uses of agriculture, permanent lakes, and wildlife habitat in accordance with the Surface Mining and Reclamation Act (PRC 2710, et seq.). (Partially achieved with this Alternative.)

- To continue to employ approximately 15 mining and processing personnel at the site.

- To resolve outstanding operational concerns identified by the County.

The operator has indicated that the proposed reclamation under Alternative 2 could not be fully implemented during the reduced permit term because the salvage of soil resources from the entire footprint of all mining phases would be required to complete the planned reclamation to agriculture, and ten years would not provide adequate time for removal of the resource, nor economically support existing equipment.

Impacts of Alternative

The following evaluates the impacts of this alternative on baseline conditions as compared to the impacts of the proposed project on baseline conditions for each impact area addressed within this Draft SEIR.

Aesthetics and Visual Resources

Under Alternative 2, mining operations at the project site would be extended by 10 years and continue until 2037. Post-reclamation uses would include open water lake, habitat, and agriculture based on the approved reclamation for the site, and after reclamation is complete (which would occur sooner than under the proposed project), the project site would no longer contribute the significant cumulative aesthetic impacts identified in the CCAP Update EIR. Relative to the proposed project, the duration of the project site's contribution to the significant cumulative aesthetic impact would be reduced. Therefore, this alternative could result in fewer impacts

related solely to aesthetic effects at the site. However, to the extent this alternative results in new mining elsewhere inside or outside of the CCAP area, aesthetic and visual impacts would increase.

Agricultural and Forestry Resources

Under Alternative 2, mining operations at the project site and associated disturbance to farmland would be similar to what would occur under the proposed project; however, the length of time portions of the site remain disturbed would decrease compared to the proposed project. All requirements for mitigation of loss of farmland resources described in Mitigation Measure 4.1-1a for the proposed project would also be implemented under this alternative. Therefore, this alternative would result in similar impacts on the project site as compared to the proposed project.

Air Quality, Greenhouse Gases, and Energy

Under Alternative 2, mining operations at the CEMEX site would cease after 2037, and emissions of criteria pollutants and greenhouse gases associated with mining and processing aggregate at the site would cease locally thus resulting in fewer direct GHG emissions. However, the product demand is likely to be met by another mining facility (local or out of the area). Therefore, combined direct and indirect GHG emissions are likely to be similar under this alternative.

Biological Resources

The area to be mined and reclaimed under the proposed project would not substantially change from the approved project. The reclamation area boundary will increase by about 100 acres reflecting the incorporation of all areas to be reclaimed into the permit plan sheets. Reclamation in these areas is required; however, they were not included in the approved reclamation plan sheets. The proposed reclaimed lakes will be further separated from the creek corridor; however, the proposed modifications to the HRP, including identified mitigation measures, will result in improved biological outcomes, particularly north of the plant site. Impacts to biological resources generally would be similar to those that would result from the proposed project; however, as proposed reclamation of a majority of the site would occur sooner under this alternative, impacts overall would be decreased as a result of the shorter period of disturbance and smaller total area of disturbance at any one time.

Cultural Resources and Tribal Cultural Resources

Under Alternative 2, soil disturbance and mining operations at the project site (activities that could impact cultural resources) and associated effects would be similar to what would occur under the proposed project. Therefore, the potential for soil disturbance and impacts to cultural resources under the Alternative 2 and the proposed project are similar.

Geology and Soils, Mineral Resources, and Paleontological Resources

Under Alternative 2, mining operations at the site would continue until closure in 2037 and reclamation of the mining areas would occur thereafter. Reclamation of the site in 2037 would effectively preclude continued mining of a known mineral resource of value to the region. Reclamation to agriculture, habitat, and open space lake features overlying existing unmined mineral resources would effectively preclude future mining of those resources, particularly if

special status species and habitat result. Failure to mine the known feasibly available resource could also result in pressures to open new mining elsewhere.

Impacts related to slope stability would be similar because reclaimed slopes would be subject to compliance with Mining Ordinance Section 10-4.431 and Reclamation Ordinance Section 10-5.504, which require slope stability analyses to demonstrate that slopes will be stable. The potential to unearth paleontological resources may be reduced because the total amount mined at the site (materials that could contain paleontological resources) would be reduced. Therefore, this alternative could result in greater impacts related to conflict with the County CCAP, but fewer impacts related to potential paleontological impacts at the project site.

Hydrology and Water Quality

Under Alternative 2, mining operations at the site would continue until closure in 2037 and reclamation of the mining areas would occur thereafter. Impacts related to hydrology and water quality (e.g., methylmercury in wet pit lakes, etc.) would be similar because the operator would be subject to compliance with all mining and reclamation ordinance requirements related to water quality protection under both this alternative and the proposed project. As assessed in Impact 4.6-1, proposed changes in the configuration of the reclaimed lakes would have no substantive adverse effect on methylmercury considerations and backfilling of Phase 3-4 lakes may be beneficial in light of preliminary mercury monitoring results. Therefore, hydrology and water quality impacts under this alternative would be similar.

Noise

Mining and processing activities and associated noise impacts would be similar to the proposed project until 2037, at which time they would cease. Noise generation and potential less-than-significant impacts related to noise at nearby receptors would be decreased between 2037 and 2047, compared to the proposed project. However, the product demand is likely to be met by another mining facility (local or out of the area). Therefore, noise associated with mining may occur elsewhere.

Transportation and Circulation

This alternative would be similar to the proposed project with respect to transportation and circulation impacts until 2037, at which time mining would cease under Alternative 1A. As detailed in Impact 4.8-1 of this Draft SEIR, the proposed project would extend mining and aggregate production at the site for 20 years (2027 to 2047) and associated truck traffic could contribute to a significant VMT impact on the public roadway network. Under this Alternative, aggregate production at the site would cease after 2037 and the contribution to the future VMT impact would be reduced. Therefore, this alternative would result in fewer impacts on the project site as compared to the proposed project. However, the product demand is likely to be met by another mining facility (local or out of the area). Therefore, VMT associated with mining may occur elsewhere.

6.4.4 Alternative 3, Limited Mining During Extended Period

Principal Characteristics

This alternative assumes the annual cap on extraction (1,204,819 tons mined; 1,000,000 tons sold), is reduced by 50 percent to 602,410 tons mined and 500,000 tons sold for the requested permit extension period (2027 to 2047). The approved 20 Percent Exceedance would continue which would allow a maximum of up to 722,892 tons mined and 600,000 tons sold in any given year. This alternative assumes that the project is modified as proposed, a permit extension is granted, and the revised reclamation plan would be implemented.

Consistency with Project Objectives

Alternative 3 generally meets three of the nine project objectives and partially meets three of them:

- To continue to supply an economic and reliable source of construction materials to the Yolo County market, leveraging the existing aggregate processing facility, conveyor system and associated infrastructure. (Partially achieved with this Alternative.)

- To modify mining phases to allow an electric dredge to efficiently move between mining phases without the need to disassemble and reassemble the dredge equipment and establish a new settling pond for deposition of process fines.

- To use the eastern 31.9 acres of the existing Phase 2 area as an extension of the existing processing plant site for purposes of product stockpiling and construction materials recycling.

- To implement the proposed reclamation plan to establish end uses of agriculture, permanent lakes, and wildlife habitat in accordance with the Surface Mining and Reclamation Act (PRC 2710, et seq.). (Partially achieved with this Alternative.)

- To continue to employ approximately 15 mining and processing personnel at the site. (Partially achieved with this Alternative.)

- To resolve outstanding operational concerns identified by the County.

The operator has indicated that the proposed reclamation under Alternative 3 could not be fully implemented during the reduced permit term because the salvage of soil resources from the entire footprint of all mining phases would be required to complete the planned reclamation to agriculture and reducing annual extraction by half would not provide adequate time for removal of the resource, nor economically support existing equipment or labor.

Impacts of Alternative

The following evaluates the impacts of this alternative on baseline conditions as compared to the impacts of the proposed project on baseline conditions for each impact area addressed within this Draft SEIR.

Aesthetics and Visual Resources

Under Alternative 3, mining operations would continue through 2047 (similar to the proposed project) but the annual cap on extraction would be reduced by 50 percent. Under this alternative, the mining period would be the same as the proposed project, but the intensity of mining and production would be reduced. Prior to completion of reclamation after 2047, the project site would continue to contribute to the significant cumulative aesthetic impact (identified in the CCAP Update EIR). Relative to the proposed project, the duration of the project site's contribution to the significant cumulative aesthetic impact (i.e., by the presence of the processing plant, stockpiles, etc.) would be similar. Therefore, this alternative would result in similar impacts on the project site as compared to the proposed project. However, to the extent this alternative results in new mining elsewhere inside or outside of the CCAP area, aesthetic and visual impacts would increase.

Agricultural and Forestry Resources

Under Alternative 3, mining operations at the project site and associated disturbance to farmland would be similar to what would occur under the proposed project. All requirements for mitigation of loss of farmland resources described in Mitigation Measure 4.1-1a for the proposed project would also be implemented under this alternative. Therefore, this alternative would result in similar impacts on the project site as compared to the proposed project.

Air Quality, Greenhouse Gases, and Energy

Under Alternative 3, mining operations and aggregate production levels at the project site would decrease between 2027 and 2047 relative to the proposed project, and emissions of criteria pollutants and greenhouse gases associated with mining and processing aggregate at the site would decrease locally due to the decreased mining, processing and hauling activity (reducing direct GHG emissions). However, the product demand is likely to be met by another mining facility (local or out of the area). Therefore, combined direct and indirect GHG emissions are likely to result in similar impacts as compared to the proposed project.

Biological Resources

Under Alternative 3, the area to be mined and reclaimed under the proposed project would not substantially change from the approved project. The reclamation area boundary will increase by about 100 acres reflecting the incorporation of all areas to be reclaimed into the permit plan sheets. Reclamation in these areas is required; however, they were not included in the approved reclamation plan sheets. The proposed reclaimed lakes will be further separated from the creek corridor; however, the proposed modifications to the HRP, including identified mitigation measures, will result in improved biological outcomes, particularly north of the plant site. Impacts to biological resources generally would be similar to those that would result from the proposed project.

Cultural Resources and Tribal Cultural Resources

The proposed project does not propose mining outside mining boundaries approved in the 1996 EIR (i.e., the area to be mined is similar under the proposed project and Alternative 3). Therefore, the potential for soil disturbance and impacts to cultural resources under the Alternative 3 and the proposed project are similar.

Geology and Soils, Mineral Resources, and Paleontological Resources

Under the Alternative 3, mining operations at the site would continue until closure in 2047 and reclamation of the mining areas would occur thereafter. Reclamation of the site in 2047 would effectively preclude continued mining of a known mineral resource of value to the region. Reclamation to agriculture, habitat, and open space lake features overlying existing unmined mineral resources would effectively preclude future mining of those resources, particularly if special status species and habitat result. Failure to mine the known feasibly available resource could also result in pressures to open new mining elsewhere.

Impacts related to slope stability would be similar because reclaimed slopes would be subject to compliance with Mining Ordinance Section 10-4.431 and Reclamation Ordinance Section 10-5.504, which require slope stability analyses to demonstrate that slopes will be stable. The potential to unearth paleontological resources would be reduced because the total amount mined at the site (materials that could contain paleontological resources) would be reduced. Therefore, this alternative would result in greater impacts related to conflict with the County CCAP, but fewer impacts related to potential paleontological impacts at the project site.

Hydrology and Water Quality

Under the Alternative 3, mining operations at the site would, similar to the proposed project, be extended 20 years (from 2027 to 2047) and reclamation of the mining areas would be completed thereafter. Impacts related to hydrology and water quality (e.g., methylmercury in wet pit lakes, etc.) would be similar because the operator would be subject to compliance with all mining and reclamation ordinance requirements related to water quality protection under both Alternative 3 and the proposed project. As assessed in Impact 4.6-1, proposed changes in the configuration of the reclaimed lakes would have no substantive adverse effect on methylmercury considerations and backfilling of Phase 3-4 lakes may be beneficial in light of preliminary mercury monitoring results. Therefore, hydrology and water quality impacts under this alternative would be similar.

Noise

Under Alternative 3, mining operations would be extended to 2047 (similar to the proposed project) but the annual cap on extraction would be reduced by 50 percent. Noise generation and potential less-than-significant impacts related to noise at nearby receptors would be slightly decreased between 2027 and 2047 (due to the decreased intensity of mining activity), compared to the proposed project. However, the product demand is likely to be met by another mining facility (local or out of the area). Therefore, noise associated with mining may occur elsewhere.

Transportation and Circulation

As detailed in Impact 4.8-1 of this Draft SEIR, the proposed project would extend mining and aggregate production at the site for 20 years (through 2047) and associated truck traffic could contribute to a significant VMT impact on the public roadway network. Under the Alternative 3, reduced production levels would result in reduced truck hauling trips to and from the project site, locally decreasing VMT after 2027. Therefore, this alternative would result in fewer impacts on the project site as compared to the proposed project. However, the product demand is likely to be met by another mining facility (local or out of the area). Therefore, VMT associated with mining may occur elsewhere.

6.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an EIR identify the environmentally-superior alternative from among the range of reasonable alternatives that are evaluated. CEQA Guidelines Section 15126.6(d)(2) states that if the environmentally-superior alternative is the no project alternative, the EIR shall also identify an environmentally-superior alternative from among the other alternatives.

All four alternatives result in less site impact overall than the proposed project, with Alternatives 1A and 1B resulting in less impact than Alternative 3 and 4 comparatively. However, it is likely that similar impacts (or possibly greater) will occur regionally as demand for aggregate resources is met by another location within the CCAP area or outside of Yolo County.

Related to significant and unavoidable loss of anticipated reclaimed farmland associated with implementation of the project, Alternatives 1A, 1B, and 2 would have less project-level impact, as compared to the proposed project. Alternative 3 would have similar impacts as the proposed project.

Related to significant and unavoidable increases in VMT associated with the proposed project, all four alternatives would result in less VMT from the project site, but as noted above, all are likely to result in increased VMT associated with the demand for aggregate being met by another location within the CCAP area or outside of Yolo County. The further aggregate mining occurs from areas of demand, the greater the haul distances and the larger the increase of VMT to regional totals.

Both No Project alternatives fail to meet the objectives of the project, and neither is consistent with the CCAP, focus on fully excavating feasibly available aggregates on land approved for mining. Alternatives 2 and 3 each meet some of the project objectives but have inconsistencies with the CCAP related to maximizing resource extraction from approved mining sites, economic use of equipment and labor, and feasibility of approved reclamation.

Based on the evaluation provided above and the comparison summary included in Table 6-2 below, the No Project Alternatives (1A and 1B are similar) would be environmentally superior to the project, because either would likely reduce impacts at the site as compared to the proposed project, and more so than Alternatives 2 and/or 3. The next best ranking environmentally superior alternative would be Alternative 2, Shorter Permit Extension Alternative. This alternative would result in similar but slightly less environmental impact for those effects identified as significant and unavoidable for the project. It results in ten fewer years of impact as compared to Alternative 3 and allows for the same amount of annual tonnage as the approved operation. Both Alternatives 2 and 3 fail to meet the project objectives. Alternative 2 generally achieves four of the nine project objectives. Alternative 3 generally achieves only three.

In summary, Alternative 2 would result in reduced impacts compared to the proposed project, meet more of the project objectives than the other alternatives, and would be considered the Environmentally Superior Alternative. None of the alternatives eliminate impacts found to be significant and unavoidable for the project. Moreover, the project fully achieves all of the project

objectives and fully mitigates impacts in all other topical areas, making it superior to the alternatives.

This page intentionally left blank.

Table 6-2: Comparison of Impacts Between Alternatives

Impact Section	Project Impact	Proposed Project Impact - Level of Significance (after mitigation)	Alternative 1A No Project Alternative	Alternative 1B No Project Alternative, Compliance Concerns Corrected	Alternative 2 Shorter Permit Extension	Alternative 3 Limited Mining During Extended Period
Aesthetics and Visual Resources	Project level LTS impacts discussed in Chapter 4.9	LTS	<	<	<	=
Agricultural and Forestry Resources	**Impact 4.1-1** Implementation of the proposed project would have the potential to 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.	SU	< (remains SU)	< (remains SU)	< (remains SU)	= (remains SU)
	Impact 4.1-2 Conflict with existing zoning for agricultural use, or a Williamson Act contract.	LTS	=	=	=	=
	Impact 4.1-3 Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland, to non-agricultural use or conversion of forest land to non-forest use.	LTS	=	=	=	=
	Impact 4.1-4 Cause a significant environmental impact due to a conflict with applicable plans, policies, or regulations adopted for the purpose of avoiding or mitigating impacts to agricultural resources.	LTS	=	=	=	=
Air Quality, GHG, and Energy	**Impact 4.2-1** The proposed project would conflict with or obstruct implementation of the applicable air quality plan.	LTS	<	<	<	<

	Impact 4.2-2 The proposed project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.	LTS	<	<	<	<
	Impact 4.2-3 The proposed project would expose sensitive receptors to substantial pollutant concentrations.	LTS	<	<	<	<
	I**mpact 4.2-4** The proposed project would result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	LTS	<	<	<	<
	Impact 4.2-5 The proposed project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	LTS	<	<	<	<
	Impact 4.2-6 The proposed project would conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	LTS	<	<	<	<
	Impact 4.2-7 The proposed project would result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation.	LTS	<	<	<	<
	Impact 4.2-8 The proposed project would conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	LTS	<	<	<	<

	Impact 4.2-9 The proposed project would cause a significant environmental impact due to a conflict with applicable plans, policies, or regulations adopted for the purpose of avoiding or mitigating impacts to air quality, GHG emissions, or energy.	LTS	<	<	<	<
Biological Resources	**Impact 4.3-1** Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.	LTS	< or =	< or =	< or =	=
	Impact 4.3-2 Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS.	LTS	<	<	<	=
	Impact 4.3-3 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.	LTS	<	<	<	=
	Impact 4.3-4 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.	LTS	<	<	<	=
	Impact 4.3-5 Conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or State habitat conservation plan.	LTS	< or =	< or =	< or =	=
	Impact 4.3-6 The project has the potential to substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or substantially reduce	LTS	<	<	<	=

	the number or restrict the range of an endangered, rare or threatened species.					
	Impact 4.3-7 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	LTS	<	<	<	=
	Impact 4.3-8 Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	LTS	=	=	=	=
Cultural Resources and Tribal Cultural Resources	**Impact 4.4-1** The proposed project could cause a substantial adverse change in the significance of an historical resource pursuant to CEQA Guidelines, Section 15064.5.	LTS	=	=	=	=
	Impact 4.4-2 Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guidelines, Section 15064.5.	LTS	=	=	=	=
	Impact 4.4-3 Disturb any human remains, including those interred outside of dedicated cemeteries.	LTS	=	=	=	=
	Impact 4.4-4 Cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC 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	LTS	=	=	=	=

	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.					
	Impact 4.4-5 The project has the potential to eliminate important examples of the major periods of California history or prehistory (CEQA Guidelines, Section 15065(a)(1)).	LTS	=	=	=	=
	Impact 4.4-6 Cause a significant environmental impact due to a conflict with applicable plans, policies, or regulations adopted for the purpose of avoiding or mitigating impacts to cultural and Tribal Cultural Resources.	LTS	=	=	=	=
Geology and Soils, Mineral Resources, and Paleontological Resources	**Impact 4.5-1** Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area based on other substantial evidence of a known fault; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides.	LTS	=	=	=	=
	Impact 4.5-2 Result in substantial erosion or loss of topsoil.	LTS	=	=	=	=
	Impact 4.5-3 Be located on a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	LTS	=	=	=	=
	Impact 4.5-4 Be located on expansive soils, as defined in Table 18-1-B of the California Building Code, creating substantial risks to life or property.	LTS	=	=	=	=

	Impact 4.5-5 Directly or indirectly destroy a unique paleontological resource.	LTS	<	<	<	<
	Impact 4.5-6 The loss of availability of a known mineral resource that would be of value to the region and the residents of the State.	LTS	>	>	>	>
	Impact 4.5-7 The loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.	LTS	>	>	>	>
	Impact 4.5-8 Cause a significant environmental impact due to a conflict with applicable plans, policies, or regulations adopted for the purpose of avoiding or mitigating impacts to geology and soils, mineral resources, and paleontological resources.	LTS	>	>	>	>
Hydrology and Water Quality	**Impact 4.6-1** The proposed project could violate a water quality standard or waste discharge requirement or otherwise substantially degrade surface or ground water quality.	LTS	=	=	=	=
	Impact 4.6-2 The proposed project could substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.	LTS	=	=	=	=
	Impact 4.6-3 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 the 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 off-site; 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	LTS	=	=	=	=

	impede or redirect flood flows.					
	Impact 4.6-4 In flood hazard, tsunami, or seiche zones, result in release of pollutants due to project inundation.	LTS	=	=	=	=
	Impact 4.6-5 Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	LTS	=	=	=	=
	Impact 4.6-6 Cause a significant environmental impact due to a conflict with applicable plans, policies, or regulations adopted for the purpose of avoiding or mitigating impacts to hydrology and water quality.	LTS	>	>	=	=
Noise	**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.	LTS	<	<	<	<
	Impact 4.7-2 Generation of excessive groundborne vibration or groundborne noise levels.	LTS	<	<	<	<
	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.	LTS	=	=	=	=
	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.	LTS	=	=	=	=

Transportation and Circulation	**Impact 4.8-1** Cause an increase in baseline total VMT.	SU	< (remains SU)	< (remains SU)	< (remains SU)	< (remains SU)
	Impact 4.8-2 Cause an inconsistency with applicable design standards.	LTS	=	=	=	=
	Impact 4.8-3 Cause a substantial decrease in safety.	LTS	=	=	=	=
	Impact 4.8-4 Cause a significant environmental impact due to a conflict with applicable plans, policies, or regulations adopted for the purpose of avoiding or mitigating transportation impacts.	LTS	<	<	<	<

Notes:
LTS: Less-than-Significant Impact.
SU: Significant and Unavoidable
= Impacts same as project.
< Fewer impacts (less severe) than proposed project.
> More impacts (greater) than proposed project.