

5.0 ALTERNATIVES

Introduction

CEQA Guidelines Section 15126.6 requires that the EIR describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially reduce any of the significant effects of the project, and evaluate the comparative merits of the alternatives. CEQA Guidelines Section 15126.6(f) states that a rule of reason shall be used in analyzing alternatives to the proposed project. The alternatives shall be limited to ones that would avoid or substantially reduce any of the significant effects of the project.

Alternatives Considered

Alternatives to the proposed project are described and the environmental impacts of each alternative compared with those associated with the proposed project. The four alternatives considered in this chapter are:

- No Project Alternative
- Alternative Project Location(s)
- Reduced Project Area Alternative
- Lower Processing Rate Alternative

In addition, CEQA requires that an environmentally superior alternative be identified, and that, if the environmentally superior alternative is the no project alternative, the EIR shall also identify another environmentally superior alternative among the other alternatives. The environmentally superior alternative is discussed in Section 5.5 of this chapter.

Introduction to the Analysis

This chapter describes each alternative and compares the potential environmental impacts to those associated with the proposed project. The impacts of each alternative are compared to those of the proposed project in Table 5.1, Proposed Project and Alternatives Impact Summary. Alternative impacts are noted as being greater, similar, or less than the proposed project; quantitative and/or qualitative information is also included in the table, as appropriate, and discussed in detail in its respective section of this chapter. Consistency with the project objectives for each alternative are identified in Table 5-2, Consistency with Project Objectives. Tables 5-1 and 5-2 are included following this alternatives analysis, beginning on page 5-8.

5.1 No Project Alternative

Alternative Description

Introduction

Consideration of the No Project Alternative is required under CEQA Guidelines Section 15126.6(e). The No Project Alternative must include consideration of what could be expected to occur in the reasonably foreseeable future, given the existing zoning and general plan designations for the site.

The No Project Alternative would consist of continued use of the site for agricultural purposes. Zoning and General Plan designations for the site limit uses to primarily agriculture and agriculture-related activities, and secondarily to resource extraction and processing, hunting and water-related recreation facilities, dwellings, airports, utilities, environmental preservation activities, public and quasi-public uses, and home occupations. Although the site is infrequently farmed, it is part of a large commercial agricultural operation encompassing the entire property.

Under the No Project Alternative, other existing permitted aggregate mining operations would be used to meet the demand for aggregate for the City of Chico, and the remainder of Butte County. The potential inability of the existing sites to meet future demand may result in the need to transport aggregate greater distances to the market area thereby increasing costs to the general public.

Key Environmental Issues

The No Project Alternative would not result in any new environmental impacts beyond those associated with the existing agricultural operation.

Comparison with the Proposed Project

Implementation of the No Project Alternative would mean that the traffic, noise, and air quality impacts associated with the proposed project would not occur at the proposed location. Current contributions of existing agricultural activities to local and regional noise, traffic, and air pollution would continue, but impacts would be less than those associated with the proposed project. Implementation of the No Project Alternative would also eliminate the visual impacts at the proposed site. Impacts discussed above may be avoided at this site if the No Project Alternative is implemented. However, depending on market need, mining at other locations may be implemented with similar impacts.

Consistency with Project Objectives

The No Project Alternative would not meet the project objectives in that known aggregate resources would not be available for mining and processing. Table 5-2 identifies the consistency of this alternative with specific project objectives.

5.2 Alternative Project Location(s)

Alternative Description

CEQA Guidelines Section 15126.6(f)(2)(A) states that “only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the Draft EIR.” Implementation of this alternative would require the relocation of the proposed open-pit aggregate mine to another location.

The successful development of the proposed project at an alternate location would depend on a number of geologic, environmental, and economic factors, primarily the existence of marketable quantities of construction grade aggregate. Therefore, options for suitable off-site alternative sites would be limited. Other factors will also affect the feasibility of aggregate mine development on a particular site including the availability of land with a willing seller or lessor, the nature of the aggregate deposit, the method of extraction, depth of overburden, percentage of sands to gravel, and the distance between the mine and the consumption area.

The objective of the proposed project is to provide aggregate for the City of Chico and Butte County consumption area. The distance to these markets is important in determining the feasibility of an aggregate mine. Other potential aggregate mine sites have not been identified in close proximity to the M&T Chico Ranch site. However, areas of potential aggregate deposits have been identified in eastern Glenn County. The Glenn County Aggregate Resource Management Plan (Glenn County, 1996), identified areas of potential aggregate reserves that occur between the cities of Orland and Willows; 14 existing mine sites are located in the vicinity of Orland, moving east to Hamilton City near the eastern border of Glenn County. Aggregate reserves and mine sites occurring in this region are located approximately 10 to 20 miles west, northwest, and southwest of the project site (refer to Figure 3-1, Regional Location Map, in Chapter 3.0). The quality of reserves found in eastern Glenn County, when compared to the quality of the aggregate found on the project site, have not been determined.

Key Environmental Issues

The siting of the proposed project at an alternate location would be subject to the potential environmental effects of developing a new aggregate mine. Any alternate site for the proposed project could include the following potential impacts:

- **Land Use:** Incompatibility with surrounding land uses; potential conversion of prime agriculture.
- **Biological Resources:** Potential direct and indirect impacts on special status plants and/or wildlife.
- **Visual Resources:** Visual impacts resulting from topographic alteration, initial project construction, mining and reclamation and light and glare.
- **Flood Hazards:** Potential flooding resulting from the alteration of the channel and/or floodplain.

- **Groundwater:** Potential impacts to groundwater quality and quantity resulting from exposure to sediments, chemicals and nutrients; potential alteration of groundwater flow and withdrawal of groundwater resources.
- **Air Quality:** Fugitive dust and/or an increase in criteria toxic pollutants or odor from equipment and batch plant emissions.
- **Traffic:** Increased traffic and safety related issues on local roadways. Any alternate location would result in increases in traffic along roadways identified in the project study area in Section 4.6, Traffic.
- **Noise:** Potential increases in noise resulting from mining activities, associated equipment, and truck traffic.

Comparison With the Proposed Project

The proposed project has been designed to minimize the area of disturbance and minimize environmental impacts as described in this Draft EIR. Table 5-1 compares the potential impacts associated with the proposed project to those that would potentially occur at another location.

The development of the proposed project at an alternate site would result in as yet undetermined environmental impacts. These potential impacts would include those described above and would therefore be similar to those identified for the proposed site described in Chapter 4 of this Draft EIR.

Consistency with Project Objectives

The degree to which an alternative location could meet the project objectives would depend upon the specific site, the available aggregate resources, access, and other considerations. An alternate site may be located that would meet the basic objective of the project of mining and processing high quality aggregate to feasibly serve the City of Chico and surrounding areas. Table 5-2 identifies this alternative's consistency with the specific project objectives.

5.3 Reduced Project Area Alternative

For purposes of comparative analysis, it is assumed that a Reduced Project Area Alternative would reduce the area of active mining under the proposed project by 50 percent. The proposed project would result in the mining of approximately 193 acres of non-native grassland and dryland agriculture over a period of 20 to 30 years. Under the Reduced Project Area Alternative, this acreage would be reduced to approximately 96.5 acres using the same mining and processing methods and rates. The life of the mine would also be reduced by approximately 50 percent to 10 to 20 years since the mining and processing methods and rates would not change under this alternative.

Key Environmental Issues

Potential environmental impacts associated with the Reduced Project Area Alternative would be similar to those for the proposed project, but somewhat reduced due to the 50 percent reduction in mining acreage. Potential impacts would include:

- **Land Use:** Incompatibility with surrounding land uses; potential conversion of prime agriculture.
- **Biological Resources:** Permanent loss of approximately 96.5 acres of non-native grassland and dryland agriculture habitat. No impacts to special-status plants or wildlife are anticipated.
- **Visual Resources:** Visual impacts resulting from topographic alteration, initial project construction, mining and reclamation and light and glare.
- **Flood Hazards:** Potential flooding resulting from the alteration of the channel and/or floodplain.
- **Groundwater:** Potential impacts to groundwater quality and quantity resulting from exposure to sediments, chemicals and nutrients; potential alteration of groundwater flow and withdrawal of groundwater resources.
- **Air Quality:** Fugitive dust and/or an increase in criteria toxic pollutants or odor from equipment and batch plant emissions.
- **Traffic:** Increased traffic and safety related issues on local roadways. Any alternate location would result in increases in traffic along roadways identified in the project study area in Section 4.6, Traffic.
- **Noise:** Potential increases in noise resulting from mining activities, associated equipment, and truck traffic.

Comparison With the Proposed Project

Table 5-1 compares the potential environmental impacts of this alternative with both scenarios of the proposed project. Some degree of impact reduction is anticipated due to the decreased surface disturbance and shortened mine life. The area of surface disturbance for mining would be approximately 96.5 acres so the affected plant communities and wildlife would be approximately 50 percent less than that for both scenarios of the proposed project. The reduced project life would also decrease the duration of potential traffic, air quality, and noise impacts. The impacts to visual resources would be reduced, both as a result of duration of visible mining related operations and facilities, and the reduction of mining acreage by 50 percent. In addition, total water usage would be less for this scenario than for the proposed project. However, construction related usage would remain the same since all mining facilities described for the proposed project would still be constructed. Reduced impacts at this site may, however, be offset by additional impacts at another location if market demand requires development on mineral resources in the Butte County area.

Consistency With Project Objectives

The development of the Reduced Processing Rate Alternative would achieve only a portion of the project objectives. The Reduced Project Area Alternative would leave approximately 50 percent known ore reserves untapped thereby reducing the economic feasibility of the proposed mining project. Table 5-2 identifies this alternative's consistency with specific project objectives.

5.4 Reduced Processing Rate Alternative

For purposes of comparative analysis, it is assumed that a Reduced Processing Rate Alternative would reduce the annual processing rate of the proposed project by 50 percent. The maximum annual processing and excavation rate under the proposed project is 275,000 cubic yards mined and 250,000 cubic yards marketed. The average annual rate is 166,667 cubic yards. This would result in total production of approximately 5.5 million cubic yards of material over the 20 to 30-year life of the proposed project.

Under the Reduced Processing Rate Alternative, this rate would be reduced by 50 percent to approximately 37,500 cubic yards per year mined and 125,000 cubic yards per year marketed. The mining and processing of the 5.5 million cubic yards of known aggregate reserves would take approximately 40 years; an increase in the life of the project of 50 percent. Mining and processing methods, in addition to the proposed reclamation plan, would remain the same as those described for the proposed project in Chapter 3.0, Project Description. A total of 193 acres would be mined under this alternative.

Key Environmental Issues

Potential environmental impacts associated with the Reduced Processing Rate Alternative would be similar to those identified for both scenarios of the proposed project since the same amount of surface disturbance (approximately 193 acres) would occur. Potential impacts would include:

- **Land Use:** Incompatibility with surrounding land uses; potential conversion of prime agriculture.
- **Biological Resources:** Loss of approximately 193 acres of non-native grassland and dryland agricultural habitat; including impacts to jurisdictional waters of the United States. No impacts to special status plants and/or wildlife would occur.
- **Visual Resources:** Visual impacts resulting from topographic alteration, initial project construction, mining and reclamation and light and glare.
- **Flood Hazards:** Potential flooding resulting from the alteration of the channel and/or floodplain.
- **Groundwater:** Potential impacts to groundwater quality and quantity resulting from exposure to sediments, chemicals and nutrients; potential alteration of groundwater flow and withdrawal of groundwater resources.
- **Air Quality:** Fugitive dust and/or an increase in criteria pollutants or odor from equipment, processing plant, batch plant, and ready-mix concrete plant emissions.

- **Traffic:** Increased traffic and safety related issues on local roadways. Any increases in the project life would result in increases in traffic along roadways identified in the project study area in Section 4.6, Traffic.
- **Noise:** Potential increases in noise resulting from mining activities, associated equipment, and truck traffic.

Comparison With the Proposed Project

Table 5-1 compares the potential environmental impacts of this alternative with that of both scenarios of the proposed project. As shown in the table, the Reduced Processing Rate Alternative would not offer any significant environmental advantage over either scenario of the proposed project. Potential impacts to biological resources would be similar to those of the proposed project primarily because the area of surface disturbance would be identical to that of the proposed project.

In some instances, environmental impacts may be greater than that for the proposed project due to the extended life of the mine. Mining equipment including excavators, draglines and/or dredges, and associated truck traffic would be in operation for the extended mine life described above thereby increasing potential impacts to air quality, traffic, and noise. A primary change to visual resources would be the 40-year duration of visible activities at the project site, compared to 20 to 30 years for the proposed project. In addition, the extended mine life would result in increased overall water usage due to the longer term need for dust control and make up water. Any potential reduction in impacts at this site may be offset by mining that may occur at another site to offset production that would be lost at this location.

Consistency With Project Objectives

This alternative would reduce the processing rate by approximately 50 percent thereby reducing the profitability of the mining operation. Table 5-2 identifies the alternatives consistency with specific project objectives.

5.5 The Environmentally Superior Alternative

CEQA Section 15126.6(e)(2) requires that an EIR identify the environmentally superior alternative. Additionally, if the environmentally superior alternative is the No Project Alternative, the EIR must also identify an environmentally superior alternative from the remaining alternatives.

For the proposed project, the No Project Alternative would be the environmentally superior alternative since no mining would occur on the project site. Among the other alternatives, the Reduced Project Area Alternative does offer some environmental advantages over the proposed project due to the reduction in mined acreage and the shortened project life.

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**TABLE 5-1
PROPOSED PROJECT AND ALTERNATIVES IMPACT SUMMARY**

Proposed Project		Reduced Project Area	Alternative Project Location	Lower Processing Rate	No Project Alternative
<i>With Batch Plant Scenario</i>	<i>Without Batch Plant Scenario</i>				
LAND USE					
Impact 4:2-1: Land Use Incompatibility					
The proposed project will result in land uses that would be incompatible with the existing and planned land uses in the vicinity.	The proposed project will result in land uses that would be compatible with the existing and planned land uses in the vicinity.	Similar Impact: Visual, noise, and traffic impacts that would be incompatible with the agricultural and residential uses in the vicinity would be similar to those for both scenarios of the proposed project.	Similar Impact: Visual, noise, and traffic impacts that would be incompatible with the agricultural and residential uses in the vicinity would be similar to those for both scenarios of the proposed project.	Similar Impact: Visual, noise, and traffic impacts that would be incompatible with the agricultural and residential uses in the vicinity would be similar to those for both scenarios of the proposed project.	No Impact: However, land use impacts associated with agricultural operations at the project site would continue.
Impact 4.2-2: Consistency with Butte County General Plan and with the Butte County Zoning and Mining Ordinance					
This scenario is inconsistent with the policies of the Butte County General Plan and with the Butte County Zoning and Mining Ordinance.	This scenario will be consistent with the policies of the Butte County General Plan and with the Butte County Zoning and Mining Ordinance.	Similar Impact: Development of batch plants is inconsistent with local policies.	Similar Impact: The proposed project at another location may be inconsistent with local planning policies.	Similar Impact: Development of the batch plants under this alternative would be inconsistent with local policies.	No Impact: However, land use impacts associated with agricultural operations at the project site would continue.
Impact 4.2-3: Conversion of Agriculture					
This scenario will result in the permanent conversion of up to 193 acres of non-prime farmland to mining uses, and eventually to open space water and wildlife habitat uses.	This scenario will result in the permanent conversion of up to 193 acres of non-prime farmland to mining uses, and eventually to open space water and wildlife habitat uses.	Reduced Impact: Approximately 96.5 acres of non-prime farmland would be converted to mining uses and eventually to open space water and wildlife uses.	Similar Impact: Up to 193 acres of farmland would be converted to mining uses at another location.	Similar Impact: Up to 193 acres of non-prime farmland would be converted to mining uses, and eventually to open space water and wildlife habitat uses.	No Impact: No conversion of agriculture to mining uses would occur.

TABLE 5-1 (continued)

Proposed Project		Reduced Project Area	Alternative Project Location	Lower Processing Rate	No Project Alternative
<i>With Batch Plant Scenario</i>	<i>Without Batch Plant Scenario</i>				
GEOLOGY					
Impact 4.3-1: Seismicity					
Expected seismic activity within the project's vicinity could result in seismically induced ground shaking and damage to mine facilities or reclamation features.	Expected seismic activity within the project vicinity could result in seismically induced ground shaking and damage to mine facilities or reclamation features.	Similar Impact: A reduced project would utilize a similar pit design and mine plan. Impacts would be similar to those for the proposed project.	Similar Impact: Seismic impacts at another location are undetermined. However, operational parameters would be similar to those of the proposed project.	Similar Impact: A lower processing rate would utilize a similar pit design and mine plan to that of the proposed project.	No Impact: However, seismic impacts to agricultural operations at the project site would continue.
Impact 4.3-2: Slope Failure					
Seismic shaking at the project site could result in both ground and slope failure and damage to reclamation features of the excavation area.	Seismic shaking at the project site could result in both ground and slope failure and damage to reclamation features of the excavation area.	Similar Impact: A reduced project would utilize a similar pit design and mine plan. Impacts would be similar to those for the proposed project.	Similar Impact: Seismic impacts at another location are undetermined. However, operational parameters would be similar to those for the proposed project.	Similar Impact: A lower processing rate would utilize a similar pit design and mine plan. Impacts would be similar to those for the proposed project.	No Impact: However, seismic impacts to agricultural operations at the project site would continue.
Impact 4.3-3: Subsidence and/or Liquefaction					
Expected seismic activity at the project site could result in subsidence and/or liquefaction of the project site.	Expected seismic activity at the project site could result in subsidence and/or liquefaction of the project site.	Similar Impact: A reduced project would utilize a similar pit design and mine plan. Impacts would be similar to those for the proposed project.	Similar Impact: Seismic impacts at another location are undetermined. However, operational parameters would be similar to those for the proposed project.	Similar Impact: A lower processing rate would utilize a similar pit design and mine plan. Impacts would be similar to those for the proposed project.	No Impact: However, seismic impacts to agricultural operations at the project site would continue.
Impact 4.3-4: Topographic Modification, Compaction, and Disruptions of Soil					
The proposed project will result in a permanent modification of the site's topography, disruption of native soils, compaction of soils, and displacement of soils as a result of onsite excavation and processing activities.	The proposed project will result in a permanent modification of the site's topography, disruption of native soils, compaction of soils, and displacement of soils as a result of onsite excavation and processing activities.	Reduced Impact: Modification of the site's topography, disruption of native soils, compaction of soils, and displacement of soils would result from 138.5 acres of surface disturbance.	Similar Impact: The placement of the proposed project at an alternate location would result in 235 acres of surface disturbance.	Similar Impact: A lower processing rate would result in 235 acres of surface disturbance.	No Impact: However, impacts to soils associated with agricultural operations at the project site would continue.

TABLE 5-1 (continued)

Proposed Project		Reduced Project Area	Alternative Project Location	Lower Processing Rate	No Project Alternative
<i>With Batch Plant Scenario</i>	<i>Without Batch Plant Scenario</i>				
Impact 4.3-5: Soil Resources					
The proposed project will convert approximately 193 acres of non-prime farmland to a non-agricultural use.	The proposed project will convert approximately 193 acres of non-prime farmland to a non-agricultural use.	Reduced Impact: The alternative would convert approximately 96.5 acres of non-prime farmland to a non-agricultural use.	Similar Impact: This alternative could convert approximately 193 acres of farmland at another location.	Similar Impact: This alternative would convert approximately 193 acres of farmland for a non-agriculture use.	No Impact: However, impacts to soils associated with agricultural operations at the project site would continue.
HYDROLOGY AND WATER QUALITY					
Impact 4.4-1: Groundwater Resources					
The proposed project will not result in significant impacts to groundwater resources. It may result in a predicted maximum seasonal drawdown of 1.0 to 3.0 feet for wells located from 300 to 1,000 feet away from the edge of the proposed pit. After the close of operations a maximum drawdown of up to 1.4 feet will occur for wells located 500 feet or more beyond the northern edge of the pit. These drawdowns are smaller than the average annual fluctuations of the water table and therefore do not exceed the standard of significance. No land subsidence will result from the project.	The proposed project could impact groundwater resources.	Reduced Impact: This alternative would reduce potential impacts to groundwater measures or wetlands as compared to both scenarios of the proposed project. No significant impacts to groundwater resources are anticipated.	Similar Impact: Impacts to groundwater resources at another location are undetermined. However, water usage would be similar to that of the proposed project.	Greater Impact: Project life would be extended by approximately 50% thereby extending potential groundwater impacts.	No Impact: However, impacts to hydrology and water quality associated with agricultural operations at the project site would continue.

TABLE 5-1 (continued)

Proposed Project		Reduced Project Area	Alternative Project Location	Lower Processing Rate	No Project Alternative
<i>With Batch Plant Scenario</i>	<i>Without Batch Plant Scenario</i>				
Impact 4.4-2: Groundwater Quality Associated with Facilities Operations					
Equipment servicing, refueling and other operations in the processing area could result in contaminants being delivered to the water table directly beneath the processing area.	Equipment servicing, refueling and other operations in the processing area could result in contaminants being delivered to the water table directly beneath the processing area.	Reduced Impact: Potential water quality impacts to the water table could still occur. However, project life would be reduced by approximately 50%.	Similar Impact: Potential water quality impacts at another location would occur as site operational parameters would be similar to that of the proposed project.	Greater Impact: Potential water quality impacts to the water table could still occur. However, project life would be increased by approximately 50%.	No Impact: However, impacts to hydrology and water quality associated with agricultural operations at the project site would continue.
Impact 4.4-3: Pit Water Quality					
Exposure of the water table through mining activities could result in contaminants being discharged to groundwater.	Exposure of the water table through mining activities could result in contaminants being discharged to groundwater.	Reduced Impact: A reduced project area would utilize a similar pit design, including pit depth. However, project life would be reduced by approximately 50%.	Similar Impact: Potential water quality impacts at another location are undeterminable. However, the project would utilize a similar pit design including pit depth to that of the proposed project.	Similar Impact: A lower processing rate would utilize a similar pit design, including pit depth to that of the proposed project.	No Impact: However, impacts to hydrology and water quality associated with agricultural operations at the project site would continue.
Impact 4.4-4: Stormwater Discharges					
Stormwater discharges from the processing facilities could enter Little Chico Creek.	Stormwater discharges from the processing facilities could enter Little Chico Creek.	Reduced Impact: Water discharges from the processing facilities could enter Little Chico Creek. However, project life would be reduced by approximately 50%.	Similar Impact: Potential impacts from stormwater discharges at another location are undetermined. However, operational parameters would be similar to those of the proposed project.	Greater Impact: Stormwater runoff from processing facilities would occur for a longer period of time than the proposed project.	No Impact: However, impacts to hydrology and water quality associated with agricultural operations at the project site would continue.
Impact 4.4-5: Erosion of Buffer Between Little Chico Creek and the Proposed Pit					
Floodwaters could flow over the 50-foot wide buffer between the Little Chico Creek and the northern edge of the pit, thereby linking surface flows from	Floodwaters could flow over the 50-foot wide buffer between Little Chico Creek and the northern edge of the pit, thereby linking surface flows from Little Chico Creek	Reduced Impact: The buffer between Little Chico Creek and the pit area would be increased over that of the proposed project.	Similar Impact: Flooding impacts of another location are undetermined. However, operational parameters would be similar to those of the proposed project.	Similar Impact: Mine pit design would be similar to that of the proposed project. Impacts would be similar to	No Impact: However, impacts to hydrology and water quality associated with agricultural

TABLE 5-1 (continued)

Proposed Project		Reduced Project Area	Alternative Project Location	Lower Processing Rate	No Project Alternative
<i>With Batch Plant Scenario</i>	<i>Without Batch Plant Scenario</i>				
Little Chico Creek to the groundwater in the pit.	to the groundwater in the pit.			those of the proposed project.	operations at the project site would continue.
Impact 4.4-6: Creek Migration					
Little Chico Creek could migrate laterally through the proposed 50-foot buffer strip separating the creek from the pit edge along the northern boundary of the proposed pit. This could result in a direct linking of surface and groundwaters, and a possible abandonment of the existing channel alignment, diminishing existing riparian habitat.	Little Chico Creek could migrate laterally through the proposed 50-foot buffer strip separating the creek from the pit edge along the northern boundary of the proposed pit. This could result in a direct linking of surface and groundwaters, and a possible abandonment of the existing channel alignment, diminishing existing riparian habitat.	Reduced Impact: The buffer between Little Chico Creek and the pit area would be increased over that of the proposed project.	Similar Impact: Project design at another location is of yet undetermined. However, operational parameters would be similar to those of the proposed project.	Similar Impact: Mine pit design would be similar to that of the proposed project. Impacts would be similar to those of the proposed project.	No Impact: However, impacts to hydrology and water quality associated with agricultural operations at the project site would continue.
Impact 4.4-7: Flooding					
Placement of dikes or fill within the processing area to raise it above the 100-year floodplain elevation could result in some increase in the frequency of flooding of River Road. Elimination of the existing distributary at the north end of the proposed pit for groundwater quality protection could result in increased flooding of the Jones' parcel.	Placement of dikes or fill within the processing area to raise it above the 100-year floodplain elevation could result in some increase in the frequency of flooding of River Road. Elimination of the existing distributary at the north end of the proposed pit for groundwater quality protection could result in increased flooding of the Jones' parcel.	Reduced Impact: Mine pit design would be similar to that of the proposed project. Impact would be similar to those of the proposed projects.	Similar Impact: Project design at another location is of yet undetermined. However, operational parameters would be similar to those of the proposed project.	Similar Impacts: Mine pit design would be similar to that of the proposed project. Impact would be similar to those of the proposed project.	No Impact: However, impacts to hydrology and water quality associated with current land use (agricultural) would continue at the site.

TABLE 5-1 (continued)

Proposed Project		Reduced Project Area	Alternative Project Location	Lower Processing Rate	No Project Alternative
<i>With Batch Plant Scenario</i>	<i>Without Batch Plant Scenario</i>				
Impact 4.4-8: Floodwater Storage and Groundwater Recharge					
Creation of the proposed pit will result, at the end of operations, in approximately 1,000 acre-feet of available floodwater storage and the same amount of potential groundwater recharge.	Creation of the proposed pit will result, at the end of operations, in approximately 1,000 acre-feet of available floodwater storage and the same amount of potential groundwater recharge.	Reduced Impact: The reduced project area would reduce the size of the available floodwater storage.	Similar Impact: Project design at another location is of yet undetermined. However, operational parameters would be similar to those of the proposed project.	Similar Impacts: A lower processing rate would utilize a similar pit design, including record land use for the site.	No Impacts: However, impacts to hydrology and water quality associated with current land use (agricultural) would continue at the site.
AIR QUALITY					
Impact 4.5-1: Increases in Fugitive Dust					
The topsoil removal, aggregate processing, and truck and equipment travel onsite will produce a net increase of fugitive PM ₁₀ . Compliance with BCAQMD rules will reduce impacts by controlling emissions to within Action Level C thresholds for PM ₁₀ .	The topsoil removal, aggregate processing, and truck and equipment travel onsite will produce a net increase of fugitive PM ₁₀ . Compliance with BCAQMD rules will reduce impacts by controlling emissions to within Action Level A thresholds for PM ₁₀ .	Reduced Impact: Project life would be shortened by approximately 50% thereby reducing overall PM ₁₀ emissions associated with the proposed project.	Similar Impact: The significance of air quality impacts at another location is undetermined. However, similar equipment and operational parameters would produce similar PM ₁₀ .	Greater Impact: Project life would be extended by approximately 50%, thereby increasing overall PM ₁₀ emissions.	Greater Impact: However, dust generation associated with agricultural operations at the project site would continue.
Impact 4.5-2: Increases in Air Contaminant Emissions from Vehicles and Equipment					
Engine exhaust emissions from excavation equipment will contribute to a net increase of criteria pollutants including NO _x , CO, and ROG.	Engine exhaust emissions from excavation equipment will contribute to a net increase of criteria pollutants including NO _x , CO, and ROG.	Reduced Impact: Project life would be shortened by approximately 50%, thereby reducing overall emissions from vehicles and equipment.	Similar Impact: The significance of air quality impacts at another location is undetermined. However, similar equipment and operational parameters would produce similar emissions from vehicles and equipment.	Greater Impact: Project life would be extended by approximately 50%, thereby reducing overall emissions from vehicles and equipment.	No Impact: However, air quality impacts associated with agricultural operations at the project site would continue.

TABLE 5-1 (continued)

Proposed Project		Reduced Project Area	Alternative Project Location	Lower Processing Rate	No Project Alternative
<i>With Batch Plant Scenario</i>	<i>Without Batch Plant Scenario</i>				
Impact 4.5-3: Increases in Air Contaminant Emissions from Asphalt Plant Operations					
Emissions from the operation of the asphalt batch plant will contribute to a net increase of criteria pollutants including NO _x , CO, and ROG within the NSVAB. Estimated NO _x emissions exceed Level C thresholds and are therefore considered a significant impact based strictly on established thresholds.	Emissions from the operation of the asphalt batch plant at a currently permitted location contribute to a net increase of criteria pollutants including NO _x , CO, and ROG within the NSVAB.	Reduced Impact: Project life would be shortened by approximately 50%, thereby reducing overall emissions from the asphalt batch plant.	Similar Impact: The significance of air quality impacts at another location is undetermined. However, similar equipment and operational parameters would produce similar emissions from asphalt plant operations.	Greater Impact: Project life would be extended by approximately 50%, thereby reducing overall emissions from asphalt batch plant operations.	No Impact: However, air quality impacts associated with agricultural operations at the project site would continue.
Impact 4.5-4: Increased Toxic Air Contaminant Emissions					
Emissions from diesel-fueled vehicles and equipment and from asphalt manufacturing will result in an increase in toxic air contaminant emissions. The estimated health risk from these emissions is less than one-in-one million. These emissions are less than the BCAQMD threshold of significance and are therefore considered less than significant.	Emissions from diesel-fueled vehicles and equipment will result in an increase in toxic air contaminant emissions. The estimated health risk from these emissions is less than one-in-one million. These emissions are less than the BCAQMD threshold of significance and are therefore considered less than significant.	Similar Impact: Equipment emissions are based on operating hours. Operating hours are related to production. Thus, a change in area without a reduction in production volume will not change the equipment emissions.	Similar Impact: The significance of air quality impacts at another location is undetermined. However, similar equipment and operational parameters would produce the same volume of emissions.	Similar Impact: A reduction in periodic volume will extend the life of the mineral deposit and extend the project life. Thus, receptors would be exposed to lower levels, but for a longer time.	No Impact: However, diesel particulate is still emitted from diesel powered agricultural equipment, so some exposure still occurs.
Impact 4.5-5: Addition to CO Hot Spot					
Certain intersections in vicinity of the project will experience congestion under cumulative conditions. Carbon monoxide emissions from vehicle traffic will increase at congested intersections	Certain intersections in vicinity of the project will experience congestion under cumulative conditions. Carbon monoxide emissions from vehicle traffic will increase at congested intersections due to increased	Similar Impact: CO hot spots are associated with traffic impacts. The traffic impacts with a reduced project area will be the same, but for a shorter duration.	Similar Impact: CO hot spots are associated with traffic impacts. The significance of traffic impacts at another location is undetermined. However, trip generation will be similar for the same volume of	Greater Impact: A reduction in periodic volume may result in fewer vehicle trips. This may reduce congestion, and therefore decrease localized CO	No Impact: However, the traffic analysis states that traffic congestion will occur in the absence of the project, and thus

TABLE 5-1 (continued)

Proposed Project		Reduced Project Area	Alternative Project Location	Lower Processing Rate	No Project Alternative
<i>With Batch Plant Scenario</i>	<i>Without Batch Plant Scenario</i>				
due to increased idling	idling time.		production.	emissions.	CO hot spots may oc-
Impact 4.5-5: Addition to CO Hot Spot (continued)					
time. Under BCAQMD thresholds of significance, the creation of a CO hot spot is a significant impact.	der BCAQMD thresholds of significance, the creation of a CO hot spot is a significant impact.		Accordingly, the traffic impacts and therefore the CO hot spots impacts would be similar.		cur in the absence of the project.
TRAFFIC					
Impact 4.6-1: Ord Ferry / Little Chico Creek Bridge					
The proposed project will add 10 or more trips per day to the bridge on Ord Ferry Road at Little Chico Creek under existing and future conditions. This bridge is 20 feet wide, which is less than the 24-foot minimum standard.	The proposed project will add 10 or more trips per day to the bridge on Ord Ferry Road at Little Chico Creek under existing and future conditions. This bridge is 20 feet wide, which is less than the 24-foot minimum standard.	Similar Impact: A reduced project area would shorten the life of the project, but would not necessarily change daily volume. Assuming daily volume does not change, the number of truck trips would not change and therefore, the impacts would be similar.	Similar Impact: The significance of traffic impacts at another location is undetermined. However, similar equipment and operational parameters would produce the same number of trips.	Greater Impact: Lower periodic volumes will generate fewer trips.	No Impact: However, traffic impacts associated with existing agricultural operations would continue.
Impact 4.6-2: River Road between Project and Chico River Road					
The proposed project will add 25 or more truck trips which cause an increase in the Traffic Index (TI) of 0.5 or greater on a County maintained roadway.	The proposed project will add 25 or more truck trips which cause an increase in the Traffic Index (TI) of 0.5 or greater on a County maintained roadway.	Similar Impact: A reduced project area would shorten the life of the project, but would not necessarily change daily volume. Assuming daily volume does not change, the number of truck trips would not change and therefore, the impacts would be similar.	Similar Impact: The significance of traffic impacts at another location is undetermined. However, similar equipment and operational parameters would produce the same number of trips.	Greater Impact: Lower periodic volumes will generate fewer trips.	No Impact: However, traffic impacts associated with existing agricultural operations would continue.
Impact 4.6-3: Dayton Road and Durham/Dayton Highway					
The proposed project will add 10 or more trips per day to the intersection of Dayton Road/Durham-Dayton Hwy.	The proposed project will add 10 or more trips per day to the intersection of Dayton Road/Durham-Dayton Hwy.	Similar Impact: A reduced project area would shorten the life of the project, but would not	Similar Impact: The significance of traffic impacts at another location is undetermined. However,	Greater Impact: Lower periodic volumes will generate fewer trips.	No Impact: However, traffic impacts associated with existing

TABLE 5-1 (continued)

Proposed Project		Reduced Project Area	Alternative Project Location	Lower Processing Rate	No Project Alternative
With Batch Plant Scenario	Without Batch Plant Scenario				
This intersection has been identified as a location having 4 or more accidents in a 12-month period over the	This intersection has been identified as a location having 4 or more accidents in a 12-month period over the	necessarily change daily volume. Assuming daily volume does not change, the number of truck trips would not	similar equipment and operational parameters would produce the same number of trips.		agricultural operations would continue.
Impact 4.6-3: Dayton Road and Durham/Dayton Highway (continued)					
last 3 years. This location also had more than one accident over a 12-month period which involved heavy vehicles.	last 3 years. This location also had more than one accident over a 12-month period which involved heavy vehicles.	change and therefore, the impacts would be similar.			
Impact 4.6-4: SR32/West 5th Street					
The proposed project will add 10 or more trips per day to the intersection of SR32/West 5 th Street. This intersection has been identified as a location having 4 or more accidents in a 12-month period over the last 3 years. This location also had more than one accident over a 12-month period which involved heavy vehicles. This is considered a significant impact.	The proposed project will add 10 or more trips per day to the intersection of SR32/West 5 th Street. This intersection has been identified as a location having 4 or more accidents in a 12-month period over the last 3 years. This location also had more than one accident over a 12-month period which involved heavy vehicles. This is considered a significant impact.	Similar Impact: A reduced project area would shorten the life of the project, but would not necessarily change daily volume. Assuming daily volume does not change, the number of truck trips would not change and therefore, the impacts would be similar.	Similar Impact: The significance of traffic impacts at another location is undetermined. However, similar equipment and operational parameters would produce the same number of trips.	Greater Impact: Lower periodic volumes will generate fewer trips.	No Impact: However, traffic impacts associated with existing agricultural operations would continue.
Impact 4.6-5: Park Avenue/East 20th Street/East Park Avenue					
The proposed project will exacerbate LOS F operating conditions on Park Avenue from East 20 th Street to East Park Avenue under cumulative conditions.	The proposed project will exacerbate LOS F operating conditions of Park Avenue from East 20 th Street to East Park Avenue under cumulative conditions.	Similar Impact: A reduced project area would shorten the life of the project, but would not necessarily change daily volume. Assuming daily volume does not change, the number of truck trips would not change and	Similar Impact: The significance of traffic impacts at another location is undetermined. However, similar equipment and operational parameters would produce the same number of trips.	Greater Impact: Lower periodic volumes will generate fewer trips.	No Impact: However, traffic impacts associated with existing agricultural operations at the project site would continue.

TABLE 5-1 (continued)

Proposed Project		Reduced Project Area	Alternative Project Location	Lower Processing Rate	No Project Alternative
<i>With Batch Plant Scenario</i>	<i>Without Batch Plant Scenario</i>				
		therefore, the impacts would be similar.			
Impact 4.6-6: East Park Avenue/Park Avenue/Highway 99					
The proposed project will exacerbate LOS F operating conditions on Park Avenue from Park Avenue to Highway 99 under cumulative conditions.	The proposed project will exacerbate LOS F operating conditions on Park Avenue from Park Avenue to Highway 99 under cumulative conditions.	Similar Impact: A reduced project area would shorten the life of the project, but would not necessarily change daily volume. Assuming daily volume does not change, the number of truck trips would not change and therefore, the impacts would be similar.	Similar Impact: The significance of traffic impacts at another location is undetermined. However, similar equipment and operational parameters would produce the same number of trips.	Greater Impact: Lower periodic volumes will generate fewer trips.	No Impact: However, traffic impacts associated with existing agricultural operations would continue.
Impact 4.6-7: Bruce Road/SR 32/Skyway					
The proposed project will exacerbate LOS E operating conditions on Bruce Road from SR 32 to Skyway under cumulative conditions.	The proposed project will exacerbate LOS E operating conditions on Bruce Road from SR 32 to Skyway under cumulative conditions.	Similar Impact: A reduced project area would shorten the life of the project, but would not necessarily change daily volume. Assuming daily volume does not change, the number of truck trips would not change and therefore, the impacts would be similar.	Similar Impact: The significance of traffic impacts at another location is undetermined. However, similar equipment and operational parameters would produce the same number of trips.	Greater Impact: Lower periodic volumes will generate fewer trips.	No Impact: However, traffic impacts associated with existing agricultural operations would continue.
Impact 4.6-8: Baldwin Plant Driveway/Skyway					
The proposed project will exacerbate LOS F operating conditions in the a.m. peak hour and LOS D in the p.m. peak hour at the intersection of the Baldwin Plant Driveway and Skyway under cumulative conditions.	The proposed project will exacerbate LOS F operating conditions in the a.m. peak hour and LOS D in the p.m. peak hour at the intersection of the Baldwin Plant Driveway and Skyway under cumulative conditions.	Similar Impact: A reduced project area would shorten the life of the project, but would not necessarily change daily volume. Assuming daily volume does not change, the number of truck trips would not change and therefore, the impacts	Similar Impact: The significance of traffic impacts at another location is undetermined. However, similar equipment and operational parameters would produce the same number of trips.	Greater Impact: Lower periodic volumes will generate fewer trips.	No Impact: However, traffic impacts associated with existing agricultural operations would continue.

TABLE 5-1 (continued)

Proposed Project		Reduced Project Area	Alternative Project Location	Lower Processing Rate	No Project Alternative
<i>With Batch Plant Scenario</i>	<i>Without Batch Plant Scenario</i>				
		would be similar.			
Impact 4.6-9: Durham-Dayton Highway/Midway					
The proposed project will exacerbate LOS F operating conditions in the a.m. peak hour and p.m. peak hour at the intersection of the Durham-Dayton highway and Midway under cumulative conditions.	The proposed project will exacerbate LOS F operating conditions in the a.m. peak hour and p.m. peak hour at the intersection of the Durham-Dayton highway and Midway under cumulative conditions.	Similar Impact: A reduced project area would shorten the life of the project, but would not necessarily change daily volume. Assuming daily volume does not change, the number of truck trips would not change and therefore, the impacts would be similar.	Similar Impact: The significance of traffic impacts at another location is undetermined. However, similar equipment and operational parameters would produce the same number of trips.	Greater Impact: Lower periodic volumes will generate fewer trips.	No Impact: However, traffic impacts associated with existing agricultural operations would continue.
BIOLOGICAL RESOURCES					
Impact 4.7-1: Loss of Non-Native Grassland and Dryland Agriculture Habitat					
The proposed project would result in the permanent loss of approximately 193 acres of annually-	The proposed project would result in the permanent loss of approximately 193 acres of annually-tilled,	Reduced Impact: Mining would disturb approximately 96.5 acres of annually tilled, non-	Similar Impact: Approximately 193 acres of habitat would be disturbed at an alternate location.	Similar Impact: Approximately 193 acres of annually-tilled non-native.	No Impact: However, biological resource impacts associated
Impact 4.7-1: Loss of Non-Native Grassland and Dryland Agriculture Habitat (continued)					
tilled, non-native grassland and dryland agriculture to open water and wetland habitat.	non-native grassland and dryland agriculture to open water and wetland habitat.	native grassland and dryland agriculture		grassland and dryland agriculture would be disturbed	with agricultural operations at the project site would continue.
Impact 4.7-2: Loss of Habitat, Disruption of Movement Patterns, and Noise					
The proposed project would disturb existing wildlife through loss of habitat, disruption of natural movement patterns, and noise.	The proposed project would disturb existing wildlife through loss of habitat, disruption of natural movement patterns, and noise.	Reduced Impact: Approximately 96.5 acres of habitat would be lost. In addition, project life would be reduced by 50%, thereby shortening mine related impacts to biological resources.	Similar Impact: Impacts to biological resources at another location are undetermined. However, equipment and operational parameters would be similar to those of the proposed project.	Greater Impact: Approximately 193 acres of habitat would be lost. In addition, project life would be extended by approximately 50%; thereby extending mine related impacts to biological resources.	No Impact: However, biological resource impacts associated with agricultural operations at the project site would continue.

TABLE 5-1 (continued)

Proposed Project		Reduced Project Area	Alternative Project Location	Lower Processing Rate	No Project Alternative
<i>With Batch Plant Scenario</i>	<i>Without Batch Plant Scenario</i>				
Impact 4.7-3: Swainson's Hawk Habitat Loss					
The proposed project will result in the loss of foraging habitat for Swainson's hawk. Disturbance to Swainson's hawks during nesting may also occur.	The proposed project will result in the loss of foraging habitat for Swainson's hawk. Disturbance to Swainson's hawk during nesting may also occur.	Reduced Impact: Approximately 96.5 acres of Swainson's hawk habitat would be lost.	Similar Impact: Impacts to Swainson's hawk habitat at an alternate location are undetermined. However, project size would be similar to that of the proposed project.	Similar Impact: Approximately 193 acres of Swainson's hawk foraging habitat would be lost.	No Impact: However, biological resource impacts associated with agricultural operations at the project site would continue.
Impact 4.7-4: Loss of Foraging and Nesting Habitat for Other Special-Status Species					
The proposed project will result in the loss of foraging and, possibly, nesting habitat for other special-status species. Mining activities could also disturb nesting for California black rail, if present, in adjacent Angel Slough.	The proposed project will result in the loss of foraging and, possibly, nesting habitat for other special-status species. Mining activities could also disturb nesting for California black rail, if present, in adjacent Angel Slough.	Reduced Impact: Approximately 96.5 acres of habitat would be lost.	Similar Impact: Impacts to foraging and nesting habitat for other special-status species are undetermined. However, project size would be similar to that of the proposed project.	Similar Impact: Approximately 193 acres of foraging and nesting habitat for other special-status species would be lost.	No Impact: However, biological resource impacts associated with agricultural operations at the project site would continue.
Impact 4.7-5: Bank Swallows					
The proposed project could result in the creation of temporary nesting sites for bank swallows.	The proposed project could result in the creation of temporary nesting sites for bank swallows.	Similar Impact: Stockpiles could create temporary nesting sites for bank swallows.	Similar Impact: Stockpiles could create temporary nesting sites for bank swallows.	Similar Impact: Stockpiles could create temporary nesting sites for bank swallows.	No Impact: However, biological resource impacts associated with agricultural operations at the project site would continue.
Impact 4.7-6: Native Oaks and Mature Trees					
The proposed project will affect native oak trees and several mature Fremont cottonwood and red willow.	The proposed project will affect native oak trees and several mature Fremont cottonwood and red willow.	Reduced Impact: Impacts to oaks would be reduced due to the reduced project size.	Similar Impact: Impacts to oaks or other native trees at another location are undetermined. However, operational parameters would be similar to those of the proposed project.	Similar Impact: A lower processing rate would not avoid impacts to oaks and the other species of native trees.	No Impact: However, these native oaks and other mature trees could be impacted by agricultural operations some time in the future.

TABLE 5-1 (continued)

Proposed Project		Reduced Project Area	Alternative Project Location	Lower Processing Rate	No Project Alternative
With Batch Plant Scenario	Without Batch Plant Scenario				
Impact 4.7-7: Modifications to Jurisdictional Wetlands					
The proposed project will impact jurisdictional wetlands.	The proposed project will impact jurisdictional wetlands.	Reduced Impact: Impacts to jurisdictional wetlands would be reduced.	Similar Impact: Impacts to jurisdictional wetlands at another location is undetermined. However operational parameters would be similar to those of the proposed project.	Similar Impact: This alternative would impact approximately 2.6 acres of jurisdictional wetlands.	No Impact: However, these jurisdictional wetlands may be impacted by agricultural operations some time in the future.
NOISE					
Impact 4.8-1: Excavation Noise					
The proposed project will result in average equipment noise levels up to 65 dBA, Leq, at the closest residence.	The proposed project will result in average equipment noise levels up to 65 dBA, Leq, at the closest residence.	Reduced Impact: Project life would be reduced by approximately 50%, thereby shortening excavation related noise.	Similar Impact: Noise impacts at another location are undetermined. However, equipment and operational parameters would be similar to those of the proposed project.	Greater Impact: Project life would be extended by approximately 50%, thereby extending excavation related noise impacts.	No Impact: However, noise impacts associated with agricultural operations at the project site would continue.
Impact 4.8-2: Screening/Crushing Noise					
Maximum and average noise levels generated by the crushing and screening plant equipment at the project site will be approximately 58 dB L _{max} and 53 dB L _{eq} at the nearest residence. The average noise level would be approximately 3 dB over the recommended 50 dB threshold.	Maximum and average noise levels generated by the crushing and screening plant equipment at the project site will be approximately 58 dB L _{max} and 53 dB L _{eq} at the nearest residence. The average noise level would be approximately 3 dB over the recommended 50 dB threshold.	Reduced Impact: Noise levels at the closest residence could be attenuated by a reduced project by increasing the distance between the pit and the residence and by the reduction in project life.	Similar Impact: Noise impacts at another location are undetermined. However, equipment and operational parameters would be similar to those of the proposed project.	Similar Impact: Project life would be extended by approximately 50%, thereby increasing material handler noise impacts.	No Impact: However, noise impacts associated with agricultural operations at the project site would continue.
Impact 4.8-3: Asphalt and Concrete Plant Noise					
The maximum and average noise levels generated by the asphalt and concrete plant equipment at the project site will be	No plant noise would be generated under this scenario. Therefore, no impacts relating to batch plant noise levels have been	Reduced Impact: Plant noise impacts would be reduced due to the reduction in project life by approximately 50%.	Similar Impact: Noise impacts at another location are undetermined. However facilities and operational parameters would be similar	Similar Impact: Project life would be extended by approximately 50%, thereby extending	No Impact: However, noise impacts associated with agricultural operations at the

TABLE 5-1 (continued)

Proposed Project		Reduced Project Area	Alternative Project Location	Lower Processing Rate	No Project Alternative
With Batch Plant Scenario	Without Batch Plant Scenario				
approximately 56 dB L _{max} and 51 dB	identified.		to those of the proposed project.	batch plant noise impacts.	project site would continue.
Impact 4.8-3: Asphalt and Concrete Plant Noise (continued)					
L _{eq} at the nearest residence to that equipment. The average noise level could exceed the recommended 50 dB L _{eq} threshold.					
Impact 4.8-4: Traffic Noise					
Increases in traffic noise will range from 0 to 2 dBA.	Increases in traffic noise will range from 0 to 2 dBA.	Reduced Impact: Project life would be shortened by approximately 50%, thereby reducing traffic noise impacts.	Similar Impact: Traffic noise impacts at another location are undetermined. However, equipment and operational parameters would be similar to those of the proposed project.	Greater Impact: Project life would be extended by approximately 50%, thereby extending traffic noise impacts.	No Impact: However, noise impacts associated with agricultural operations at the project site would continue.
AESTHETICS					
Impact 4.9-1: Initial Mine and Plant Construction					
Initial construction of the project would reduce the visual quality of the project site.	Initial construction of the proposed project would reduce the visual quality of the project site.	Similar Impact: Construction would proceed in the same manner as the proposed project.	Similar Impact: Initial construction of the project, even at another location, could reduce the visual quality of the site.	Similar Impact: Construction would proceed in the same manner as the proposed project.	No Impact: However, visual impacts associated with agricultural operations at the project site would continue.
Impact 4.9-2: Mining and Processing Operations					
Proposed mining and processing operations would result in both temporary and permanent alteration of the visual quality of the site.	The proposed project Without Batch Plants Scenario would result in both temporary and permanent alteration of the visual quality of the site.	Reduced Impact: Impacts associated with mining and processing operations would be reduced due to the reduction in project life. However, the site would be permanently altered.	Similar Impact: Temporary and permanent alteration of the project would occur regardless of project location.	Similar Impact: Visual impacts associated with mining/ processing operations would be extended due to extension in project life, permanent alteration of the site would be similar to the proposed	No Impact: However, visual impacts associated with agricultural operations at the project site would continue.

TABLE 5-1 (continued)

Proposed Project		Reduced Project Area	Alternative Project Location	Lower Processing Rate	No Project Alternative
<i>With Batch Plant Scenario</i>	<i>Without Batch Plant Scenario</i>				
				project.	
Impact 4.9-3: Light and Glare					
The proposed project could result in extended lighting for occasional night time mining operations.	The proposed project could result in extended lighting for occasional night time mining operations.	Similar Impact: Occasional night time operations could result under this alternative.	Similar Impact: Occasional night time operations could result under this alternative.	Similar Impact: Occasional night time operations could result under this alternative.	No Impact: However, visual impacts associated with agricultural operations at the project site would continue.
Impact 4.9-4: Site Reclamation					
The proposed project would alter the visual character of the site following reclamation.	The proposed project would alter the visual character of the site following reclamation.	Reduced Impact: The visual character of the site would be altered, but to a lesser degree due to the reduced project area.	Similar Impact: The visual character of the site would be altered in response to mining operations, regardless of the project location.	Similar Impact: The visual character of the site would be altered in the same manner as the proposed project.	No Impact: However, visual impacts associated with agricultural operations at the project site would continue.
CULTURAL RESOURCES					
Impact 4.10-1: Disturbance of Subsurface Archaeological, Historic, or Cultural Resources					
The proposed project has the potential to result in the disturbance of subsurface archaeological, historic, or cultural resources.	The proposed project has the potential to result in the disturbance of subsurface archaeological, historic, or cultural resources.	Reduced Impact: Subsurface cultural resources could still be impacted. However, project size would be approximately 50% less than that of the proposed project.	Similar Impact: Impacts to cultural resources at another location is undetermined. However, operational parameters, including project size, would be similar to those of the proposed project.	Similar Impact: Impacts to cultural resources would be similar to those of the proposed project.	No Impact: However, potential impacts associated with agricultural operations at the project site would continue.
Impact 4.10-2: Disturbance of Cultural Resources					
The proposed project will not disturb any listed cultural resources.	The proposed project will not disturb any listed cultural resources.	Reduced Impact: Subsurface cultural resources could still be impacted. However, project size would be approximately 50% less than that of the proposed project.	Similar Impact: Impacts to cultural resources at another location is undetermined. However, operational parameters, including project size, would be similar to those of the proposed project.	Similar Impact: Impacts to cultural resources would be similar to those of the proposed project.	No Impact: However, potential impacts associated with agricultural operations at the project site would continue.

TABLE 5-1 (continued)

Proposed Project		Reduced Project Area	Alternative Project Location	Lower Processing Rate	No Project Alternative
<i>With Batch Plant Scenario</i>	<i>Without Batch Plant Scenario</i>				
Impact 4.10-3: Unique Cultural Values or Religious or Sacred Uses					
The proposed project is not known to be the site of any unique cultural values or existing religious or sacred uses that would be affected or restricted by the project.	The proposed project is not known to be the site of any unique cultural values or existing religious or sacred uses that would be affected or restricted by the project.	Similar Impact: There are no known unique cultural resources or existing religious or sacred uses of the project site.	Similar Impact: Impacts to cultural resources at another location is undetermined. However, operational parameters, including project size, would be similar to those of the proposed project.	Similar Impact: There are no known unique cultural resources or existing religious or sacred uses of the project site.	No Impact: However, potential impacts associated with agricultural operations at the project site would continue.

TABLE 5-2
CONSISTENCY WITH PROJECT OBJECTIVES

Project Objectives	Proposed Project: With Batch Plants Scenario	Proposed Project: Without Batch Plants Scenario	Reduced Project Area Alternative	Alternative Project Location	Lower Processing Rate Alternative	No Action Alternative
Secure approvals to mine and process known high quality aggregate close enough to the City of Chico to feasibly serve the area.	Yes	Yes	Yes: Mining and processing of known aggregate resources would occur of the project site. However, approximately 50% of the known aggregate reserves would not be mined.	No: However, an exact location is undetermined at this time and it is unlikely that a site could be acquired at this close proximity to the City of Chico.	Yes	No: Known aggregate reserves at this site would not be developed under this alternative.
Operate a profitable mining operation.	Yes	Yes	No: This alternative would leave approximately 50% of the known aggregate reserves. However, capital expenditures required to develop this alternative would be similar to those of the proposed project.	Yes	No: The mine and processing facilities would operate at approximately 50% of capacity thereby reducing overall profitability of the operation.	No: The proposed mine would not be developed under this alternative.
Provide for a reasonable period of approved operations, in accordance with availability of resources, agreements, mining and reclamation plans and foreseeable market demands.	Yes	Yes	No: The period of operation would be reduced by approximately 50% and approximately 50% of the known aggregate reserves would not be mined.	Yes	Yes	No: The proposed mine would not be developed under this alternative.
Secure approvals on a site already owned or leased by the Applicant, that contains high quality aggregate resources.	Yes	Yes	Yes	No: The Applicant would be required to acquire a new site at an as of yet, undetermined location.	Yes	No: As the proposed mine would not be developed at this site, the Applicant would need to acquire another site and seek the necessary approvals.

TABLE 5-2 (continued)

Project Objectives	Proposed Project: With Batch Plants Scenario	Proposed Project: Without Batch Plants Scenario	Reduced Project Area Alternative	Alternative Project Location	Lower Processing Rate Alternative	No Action Alternative
Provide for an annual maximum production level of 250,000 cubic yards, marketed (approximately 275,000 cubic yards mined).	Yes	Yes	Yes	Yes	No	No: The known aggregate reserves would not be mined or processed.
Process extracted materials onsite to achieve maximum possible operational efficiency.	Yes	No: Aggregate mined at the site would need to be transported offsite to an existing processing facility. This would reduce the overall efficiency of the mine.	Yes	Yes	Yes: However, the mine and processing facilities would operate at approximately 50% of the capacity thereby reducing overall operational efficiency.	No: The proposed mine would not be developed under this alternative.
Provide employment for up to 25 people, as well as indirectly supporting existing employment in construction materials and services and other related businesses.	Yes	Yes	Yes	Yes	Yes	No: As the proposed mine would not be developed, there would be no employment opportunities nor any support for related businesses.
Avoid mining on, and impacts to, prime farmland.	Yes	Yes	Yes	Yes	Yes	Yes
Implement a reclamation program designed to minimize erosion and enhance wildlife and aesthetic values by restoring wildlife habitat lost during the years of agricultural production.	Yes	Yes	Yes	Yes	Yes	No: As the proposed mine would not be developed, enhancement of wildlife and aesthetic values would not occur.
Provide for long-term (in perpetuity) management, stewardship, and preservation of high quality habitat on the reclaimed site.	Yes	Yes	Yes	Yes	Yes	No: No high-quality wildlife would be created at the site.