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## 10.0 PROJECT ALTERNATIVES

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CEQA Guidelines Section 15126.6 states that and EIR shall describe a range of reasonable alternatives to a project or location of the project which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project. The discussion of alternatives is to focus on alternatives that are capable of avoiding or substantially reducing any significant effects of the project even if these alternatives would impede to some degree the attainment of the project objectives. Factors that may be taken into account when considering feasibility are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site.

### 10.1 CONSIDERED AND REJECTED ALTERNATIVES

Several potential alternatives have been identified and rejected from further consideration in the Project Alternative analysis due to infeasibility, not achieving project objectives, or not avoiding or substantially lessening environmental impact. These alternatives include Alternative Project Locations, Full Boundary Expansion, Modified Legal Mining Limit, and Reduced Boundary Expansion Area. In addition, a Modified Overburden and Spoils Disposal Alternative was considered and ultimately accepted as project mitigation.

#### 10.1.1 Alternative Project Locations

Alternative unmined project locations are infeasible because the nature of the project is mineral resource extraction, which ties the project location to where the limestone marble occurs. Also, CEMEX does not have vested mining rights in other locations. An alternative existing quarry location is the San Vicente Limestone Quarry. The San Vicente Quarry is owned by CEMEX and ceased operations approximately 35 to 40 years ago when mining commenced in the Bonny Doon Quarries. The 1964 use permit (1941-U) for San Vicente Quarry authorizes the continuation of mining of limestone; however a Certificate of Compliance and Reclamation Plan approval is required pursuant to SMARA and the County Mining Regulations in order to reactivate mining. A Mining Approval may also be required depending on the effect of the significant time lapse on any vested rights. Reactivation of the San Vicente Quarry would be subject to new environmental review under CEQA. The status of limestone resources in the previously permitted quarry and the transportation corridor (rail line) between the quarry and the cement plant has not been studied. Due to these factors, the reactivation of the San Vicente Limestone Quarry is not a feasible alternative for the Bonny Doon Limestone Quarry Boundary Expansion EIR.

#### 10.1.2 Full Boundary Expansion Alternative

Full boundary expansion, or mining all remaining 26.5 acres of the vested rights area, was initially considered by CEMEX at project application but was rejected in favor of the proposed 17.1 acre project in order to reduce or avoid potential water quality and water quantity impacts to Liddell Spring. This larger full boundary expansion alternative does not reduce any

environmental impact of the project and therefore does not meet the CEQA purpose of a project alternative.

### **10.1.3 Modified Legal Mining Limit Alternative**

Modifying the Legal Mining Limit of the Limestone Quarry to expand operations toward the north is infeasible due to general plan and zoning constraints of the adjacent properties; the Quarry does not have vested mining rights outside of the established Legal Mining Limit.

### **10.1.4 Reduced Boundary Expansion Area Alternative**

Reducing the size of the Boundary Expansion Area to less than the proposed 17.1 acres would offer less than the 3-year extension of quarry life provided by the project. This reduction in quarry life is not practical for the quarry operation. Additional slope stability analysis is required as project mitigation (Measure GEO-2). If the analysis shows that the minimum factor of safety of 1.2 cannot be met, the slope gradient must be reduced until the minimum safety factor is achieved. Any reduction in slope gradient would reduce the 3-year extension of quarry life. A Reduced Boundary Expansion Area coupled with a reduced slope gradient (if determined to be necessary) would so reduce the quarry life extension as to make the project infeasible.

### **10.1.5 Modified Overburden and Spoils Disposal Alternative**

Modifying the proposed placement of overburden and spoils on the quarry floor was considered during the environmental review for the purpose of reducing water quality impacts to Liddell Spring. As currently designed, the proposed expansion would dispose of quarry overburden and spoils by placing them in the western half of the existing quarry pit. Because of the depth of this fill (approximately 250 feet), the material would likely compact over time, ultimately inhibiting percolation of runoff into the karst system on the portion of the quarry floor covered by the overburden. This, in turn, would reduce the amount of water flowing into Liddell Spring. Fines from the overburden and spoils fill area would also be washed into the karst system, impairing water quality at the spring. As an alternative to the proposed fill design, overburden and spoils could be placed across the entire quarry floor at a depth of approximately 15 feet to retain and slowly infiltrate drainage from the quarry pit into the karst aquifer. This approach would enable the overburden to be constructed as a filter for percolating surface water. This modified design to overburden disposal was determined to be feasible and was adopted as project mitigation (Measure HYD-1).

## **10.2 NO PROJECT ALTERNATIVE**

Under the No Project Alternative, the Use Permit amendment, COC amendment, Coastal Development Permit, and the proposed 1996 Reclamation Plan Amendment would be denied. The limestone reserves within the Boundary Expansion Area of the Legal Mining Limit of the quarry would not be mined. The 1996 Reclamation Plan as conditionally approved in 1997 would remain in effect. Quarry life would not be extended by three years. The Limestone Quarry has reached its final contours under the existing approved mining plan perimeter. Therefore, the denial of permits under the No Project Alternative would result in closure of the quarry and likely closure of the associated cement plant in Davenport.

## **County Plans and Policies**

The proposed Boundary Expansion Area is located within the Legal Mining Limit, and CEMEX's right to mine the Boundary Expansion Area is protected under vested rights. The County's authority to restrict the proposed mining expansion into the Boundary Expansion Area is limited to public health and safety concerns. Unless the proposed project causes public harm that cannot be abated, denying the Limestone Quarry expansion under the No Project Alternative is not a legally viable option for the County to consider.

The Quarry operations are subject to applicable GP/LCP policies, Mining Regulations, Use Permit 3232-U Conditions, and COC Conditions of Approval. The proposed project requires mitigation (see Section 3.4) to be compliant with these regulations. Under the No Project Alternative, the non-compliant conditions would not occur and mitigation would not be necessary.

## **Geology**

Under the No Project Alternative, the Limestone Quarry pit would not be expanded by 17.1 acres. The north wall of the quarry, which has shown some area of instability, would not be expanded. Waste material from the Boundary Expansion Area would not be placed in the quarry pit along the west wall. The new fill placed on the quarry floor would not stabilize slopes subject to landsliding on the west wall. Increased erosion sedimentation impacts related to the overburden removal in the mining Boundary Expansion Area would not occur. The potential for increased sediment loads to be released downstream in the event of seismic failure of the sediment basin levees would also be eliminated. The seismic shaking and seismic ground deformation impacts (surface rupture, liquefaction, landsliding) are not increased by the project and would remain the same under the No Project Alternative. Protective measures to avoid renewed movement of the Liddell Spring landslide and updating the seismic stability analyses for the sediment basins would not be implemented. Potential project impacts on geology are reduced to less-than-significant through mitigation. Under the No Project Alternative, the project's less than significant geologic impacts would be eliminated.

## **Hydrology**

Under the No Project Alternative, mining operations would not expand beyond the present mining plan boundary. No vegetation clearance or overburden removal would occur on the 17.1 project acres. There would be no increase in storm runoff volumes generated by the quarry. Sediment loads in the storm drainage entering the quarry sediment basins would not be increased. New sediment loads would not enter the ground water system potentially increasing the turbidity levels of Liddell Spring. Impacts to water quality and quantity of Liddell Spring would not be increased above existing conditions. Any new agreements between the City of Santa Cruz and CEMEX to protect or improve water quality at Liddell Spring may not occur. Project mitigation designed to reduce turbidity impacts at Liddell Spring would not be implemented. Potential project impacts on hydrology and water quality are reduced to less-than-significant through mitigation. The project's less than significant water quality and water quantity impacts to Liddell Spring or water quality impacts to downstream Liddell Creek would not occur.

## **Biology**

Under the No Project Alternative, the 17.1 acres of forest and scrub habitat would not be removed. There would be no loss of biological resources. No loss of habitat or potential harm to the San Francisco dusky-footed woodrat, a California species of special concern, would occur. Raptors, non-game birds and bat species of concern, which could nest in the area, would not be impacted. Potential project impacts upon wildlife species are potentially significant but reduced through mitigation. Under the No Project Alternative, these less than significant impacts would be eliminated.

With denial of the 1996 Reclamation Plan Amendment, the planting strategy specified in the approved 1996 Reclamation Plan would remain in effect and would continue into the future. The existing efforts to plant climax vegetation would continue as required with limited success due to harsh undeveloped soil conditions. Native topsoil is available for approximately 12 acres, which would still be planted with diverse native grassland as currently planned by CEMEX. The 1996 revegetation requirements for northern maritime chaparral, needlegrass grassland, mixed grassland, central coast scrub, riparian forest, and redwood forest would be met by the success of previous and current revegetation work (Table 9-1). The 1:1 replacement requirement for 46 acres of mixed evergreen forest would remain in effect. However, revegetation efforts to establish this climactic plant community can only be successful after years of soil development that may not occur until after the reclamation planting period is completed. The 1996 Reclamation Plan Amendment incorporates a strategy of establishing earlier successional stages of vegetation in order to build the soil and would likely show better success in establishing climax forest vegetation in reclaimed areas over time. Under the No Project Alternative this strategy in the 1996 Reclamation Plan Amendment would not be implemented.

## **Air Quality**

Under the No Project Alternative, mining operations would continue until the final mining configuration of the current mining plan boundary is achieved. Dust and equipment emissions generated by current mining operations would continue until operations cease. The quarry life would not be extended by approximately three years and therefore the air pollutant emissions associated with the quarry operation would not be prolonged. The additional emissions associated with the removal and transport of overburden from the mining Boundary Expansion Area would not occur. The source location of air pollutant emissions within the quarry would remain within the same boundary and would not shift by several hundred feet to the east. The project would not lead to a projected violation of an ambient air quality standard or a significant adverse impact beyond the Quarry property boundary, as long as the active work areas remain below the acreage limits set by the Monterey Bay Unified Air Pollution Control District as identified in Measure AQ-1. Therefore, under the No Project Alternative, the project's less than significant air quality impacts would be eliminated.

## **Noise**

Under the No Project Alternative, mining operations would not expand into the northeast corner of its vested rights mining area. Mining occurs within 25 feet of the northern property boundary. Elevated noise levels along the property line would continue as they presently occur and would not be increased. The potential noise increase from the project is not significant, and

would be approved by the Planning Commission as permissible by the Mining Regulations (see Measure NOI-1). Under the No Project Alternative, the less than significant noise impact would not occur.

### **Energy and Natural Resources**

Under the No Project Alternative, mining operations would not expand and 17.1 acres of timberland resources would not be removed. The loss of this timberland resource by the proposed project is not considered a significant impact, and does not require mitigation. Therefore, under the No Project Alternative, the project's less than significant impact on Natural Resources would be eliminated.

### **10.3 ENVIRONMENTALLY SUPERIOR ALTERNATIVE**

CEQA requires that the EIR analysis of project alternatives identify an "environmentally superior" alternative. If the environmentally superior alternative is the "No Project" alternative, the EIR shall also identify an environmentally superior alternative from among the other alternatives. The No Project Alternative eliminates the environmental impacts associated with the project and is the environmentally superior alternative. Although the No Project Alternative does not achieve the project objective of continuing the limestone mining operation, as explained above in Considered and Rejected Alternatives, there are no other Project Alternatives available to the Quarry that can meet the project objectives.