3.11 Population and Housing

This section of the Draft Final Environmental Impact Report describes the existing population and housing conditions within the surrounding area of the Eagle Mountain Pumped Storage Project (Project) area. It then characterizes the potential impacts of the proposed Project on population and housing. The impact analysis is based upon literature review of pertinent documents and Project area site visits. This analysis of population and housing, as well as socioeconomic effects, relies on Riverside County statistics, with analysis of local details as well.

3.11.1 Regulatory Setting

There are no federal laws or regulations for population and housing that apply to the effects of an individual project on population growth or displacement of people and provision of replacement housing. California Government Code Sections 65580 through 65589.8 states that cities and counties have a responsibility to facilitate the improvement and development of housing and to adequately provide for the housing needs of all economic segments of the community. These sections also require cities and counties to prepare and implement housing elements addressing housing needs and provision.

3.11.2 Existing Conditions

Riverside County was formed in 1893 from parts of San Bernardino County and San Diego County, and is one of the largest counties in the United States. Riverside County, located in southern California, stretches from the Colorado River and Arizona border in the east to Orange County and within 14 miles of the Pacific Ocean to the west. Riverside County shares borders with Los Angeles, Imperial, Orange, San Diego, and San Bernardino counties. Riverside County encompasses approximately 7,300 square miles.

Riverside County has an estimated population of 2,088,322 people according to the California State Department of Finance (California DOF, 2008). The 2003 Riverside County General Plan (RCGP, 2003) provides a summary of existing and proposed land use patterns within Riverside County. Much of central and eastern Riverside County land is federal land comprised of a complex mix of public open space and protected areas.

The U.S. Bureau of Land Management (BLM), Bureau of Indian Affairs, National Park Service, U.S. Forest Service, U.S. Department of Defense, and the California Department of Parks and Recreation are the principal stewards of these lands. They include a National Park (Joshua Tree), two National Forests (Cleveland and San Bernardino), a National Wildlife Refuge (Coachella Valley), a National Monument (Santa Rosa/San Jacinto Mountains), the California Desert Conservation Area, several state parks, and many Wilderness Areas and areas designated by the BLM as Areas of Critical Environmental Concern (ACEC). Property ownership patterns are complex and many private and public lands are contained within these “protected” areas.

Urban development is primarily concentrated in western and central Riverside County. Centrally located is the urban area of the Coachella Valley consisting of Bermuda Dunes, Cathedral City,

Coachella, Desert Hot Springs, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, and Rancho Mirage, as well as various unincorporated areas. The Project is east of this urban development. The only urban area east of the Project is the City of Blythe, located on the eastern edge of Riverside County along the Colorado River, with a population of 21,695 in 2008. The rest of Riverside County is mainly open space with small rural communities dispersed among the large open areas.

Riverside County has seen recent significant growth in land use for public utilities and renewable energy generation facilities. Many wind energy generation facilities are located in the San Gorgonio Pass and Coachella Valley and there is significant interest in development of solar power facilities in eastern Riverside County.

3.11.2.1 Identification of the Area Potentially Impacted by the Project

The Project region is defined as the unincorporated areas of eastern Riverside County (Eagle Mountain, Lake Tamarisk, and Desert Center) and cities within approximately 60 miles of the Project (Blythe, Coachella, Indio, Palm Desert, Cathedral City, and Palm Springs). Construction workers will likely commute from these areas. Some of the construction workers will likely move closer to the Project for extended periods. Thus, any population effects and the associated environmental impacts would occur in the cities and unincorporated areas nearest the Project. Although much of the population and housing analysis is based on county-wide data, this impact analysis is focused on areas around the proposed Project where population effects would be more apparent.

The population of Riverside County has increased at a fast pace, totaling 35 percent from 2000 to 2008 and reaching 2,088,322 people, according to the County of Riverside Economic Development Agency (EDA). The county ranks as the second fastest growing and has climbed from seventh in 1990 to fourth largest county in the state (California DOF, 2008). The demand from a fast increasing populace will help to generate strong expansion in the services, retail trade, government, and construction industries. The Riverside County employment analysis for 2006 is depicted in Table 3.11-1.

3.11.2.2 Employment in Riverside County

Agricultural Sector. Agricultural employment within the county was at 14,200 in 2006 and has steadily fallen from the high of 17,600 people in 2000 (California EDD, 2008). This represents a decrease in employment of 19.3 percent. The California Employment Development Department (California, EDD) projects that the Riverside and San Bernardino counties had a combined agricultural employment of 18,700 in 2004 and project 17,200 in 2014.

Mining Sector. Mining represents a very small percentage (1 percent) of the total nonagricultural employment within Riverside County. In 2006 the mining industry employed 600 people in Riverside County. The California EDD projects that the Riverside and San Bernardino counties had a combined mining employment of 1,200 in 2004 and project 1,600 in 2014.

Table 3.11-1. Riverside County Employment Analysis

Industry	Individuals	Percentage
Agriculture, forestry, fishing and hunting, and mining	13824	1.6%
Construction	112297	12.7%
Manufacturing	90885	10.3%
Wholesale trade	32279	3.7%
Retail trade	119795	13.6%
Transportation and warehousing, and utilities	40334	4.6%
Information	16973	1.9%
Finance, insurance, real estate, and rental and leasing	58680	6.7%
Professional, scientific, management, administrative	80500	9.1%
Educational, health and social services	147594	16.7%
Arts, entertainment, recreation and food services	90159	10.2%
Public Administration	35430	4.0%
Other Services	42553	4.8%
Total	881303	

Source: Bureau of the Census 2006

Construction Sector. The construction sector has shown increasing gains in employment since 1993 when 21,200 where employed to 2006 when 83,000 where employed. The California EDD projects that the Riverside and San Bernardino counties had a combined construction employment of 111,800 in 2004 and project 145,300 in 2014, a 30 percent increase. A possible slowdown in construction growth could be seen since 2006 as the housing market has slowed significantly. Riverside County had 30,350 single family and 4,023 multi-family building permits in 2005; only 9,587 single-family and 903 multi-family building permits in 2007; and 3,745 single-family and 1,798 multi-family building permits in 2008 (EDA, 2004).

Manufacturing Sector. The manufacturing sector has seen slow gains in employment since 1991 with a small decrease in 2001 and 2002. The manufacturing sector in Riverside County employed 56,100 people in 2006 and accounts for 9.2 percent of the nonagricultural employment. The California EDD projects that the Riverside and San Bernardino counties had a combined manufacturing employment of 120,100 in 2004 and project 129,000 in 2014, a 7.4 percent increase.

Trade, Transportation, and Public Utilities Sector. The trade, transportation, and public utilities sector has shown increasing gains in employment since 1994 when 63,700 were employed to 2006 when 123,800 were employed. The rapid population growth propelled the need for intra-city and county transportation. In addition, bus transportation should increase at a fast pace, reflecting the population growth trend. The California EDD projects that the Riverside and San Bernardino counties had a combined trade, transportation, and public utilities sector employment of 254,900 in 2004 and project 334,200 in 2014, a 31.1 percent increase.

Service Sector. By far the largest source of jobs is the services sector with 470,600 jobs in 2006. The service provider sector accounts for 77.1 percent of the nonagricultural employment. Major sources of new jobs have occurred at healthcare facilities, in hotels and lodging services, and business and other services such as social and membership services.

Government Sector. The government sector has seen steady gains in employment since 1990. The government sector in Riverside County employed 105,100 people in 2006 and accounts for 17.2 percent of the nonagricultural employment. This trend follows the increase in population as more services are required. The California EDD projects that the Riverside and San Bernardino counties had a combined manufacturing employment of 212,500 in 2004 and projected 256,600 in 2014 a 20.8 percent increase.

3.11.2.3 Existing Housing

Within Riverside County, approximately 773,331 housing units exist based on 2008 data from the California DOF. This compares to 584,674 units in 2000. Single family housing accounted for a majority of these units consisting of 559,169 units in 2008. Multiple family housing accounted for 127,740 in 2008.

The median home price for Riverside County stood at $234,105 in January 2009. Housing accommodations for cities in the Project region are depicted in Table 3.11-2.

In 2008, the vacancy rate for all housing units (single family, multiple family, and mobile homes) within Riverside County was 13 percent. Within the Project region, Palm Springs accounted for the highest vacancy rate at 33.4 percent or 11,192 units in 2008, while the City of Coachella experienced the lowest rate at 4.4 percent or 386 units. The combined total number of vacant housing units for the six cities within the Project region is 28,021 with 100,533 vacant units county-wide (California DOF, 2008). The Census 2005-2007 Community Survey shows 193,931 renter-occupied housing units and a rental vacancy rate of 6.2 percent with 12,818 vacant rental units.

Table 3.11-2. Housing Accommodations and Characteristics

	Median Home Price		Median Rental Price	Total Units		Vacancy Rate		Owner Occupied
Area	2000	2008	2000	2000	2008	2000	2008	2000
Blythe	$90,800	$187,000	$501	4,851	5,444	16.2%	16.1%	57%
Cathedral City	$125,500	$226,500	$695	17,813	21,561	21.7%	21.1%	65%
Coachella	$83,700	$215,500	$470	4,807	8,814	4.4%	4.4%	61%
Indio	$99,000	$272,500	$579	16,899	26,464	18.0%	18.0%	56%
Palm Desert	$189,100	$382,500	$744	28,071	34,120	31.5%	31.0%	67%
Palm Springs	$157,000	$295,000	$631	30,979	33,479	33.3%	33.4%	61%
Riverside County	$146,500	$275,000	$660	584,674	773,331	13.4%	13.0%	69%

Source: Bureau of the Census, Riverside County Economic Development Agency

3.11.2.4 Temporary Accommodations

Within the cities in the Project region, there are approximately 257 hotels/motels accounting for 11,599 rooms. Palm Springs has the highest number of hotels and motels with 187 and 6,400 rooms (EDA, 2004).

3.11.3 Potential Environmental Impacts

3.11.3.1 Methodology

Preparation of this section included review of Census and Riverside County statistics, and site visits. Projections for employment needs are based on project design features for construction and operational activities. For purposes of this analysis, housing accommodations, current population counts, and employment statistics were reviewed considering the construction and operational needs of the Project.

3.11.3.2 Thresholds of Significance

The State Water Resources Control Board concludes that the Project may have significant impacts on aesthetics and visual resources if it does any of the following:

(a) Induce substantial population growth in an area, either directly or indirectly and/or

(b) Displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere

3.11.3.3 Environmental Impact Assessment

3.11.3.3.1 *On-site Employment and Labor Income*

Construction of the proposed Project is expected to occur over a period of 4 years and generate an approximate 4,674 person-months of employment over the duration of construction. Table 3.11-3 contains a breakdown of the employment requirements for the Project summarized by task and duration. Table 3.11-4 provides a summary of the manpower requirements for the Project.

Table 3.11-3. Employment Projections by Year

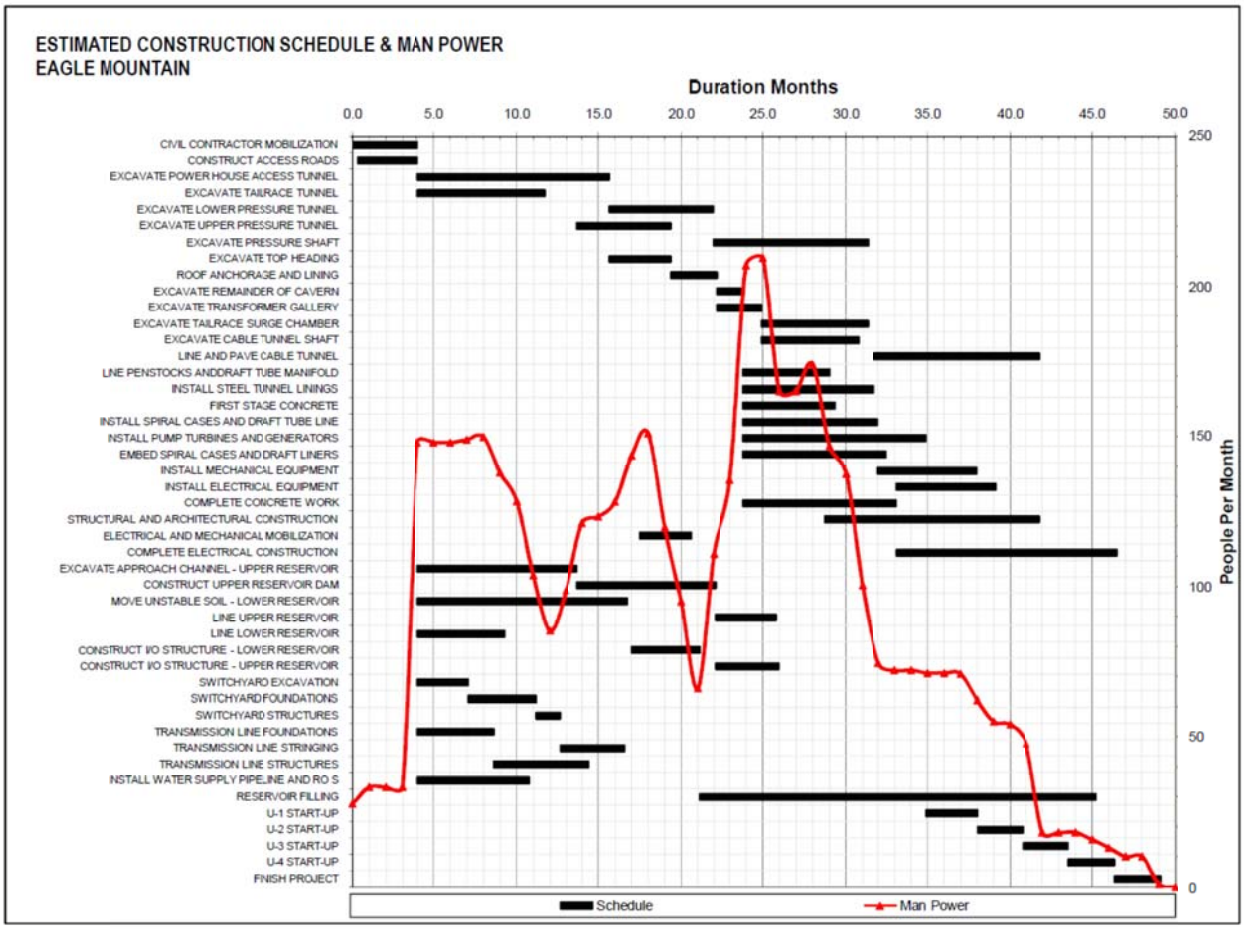
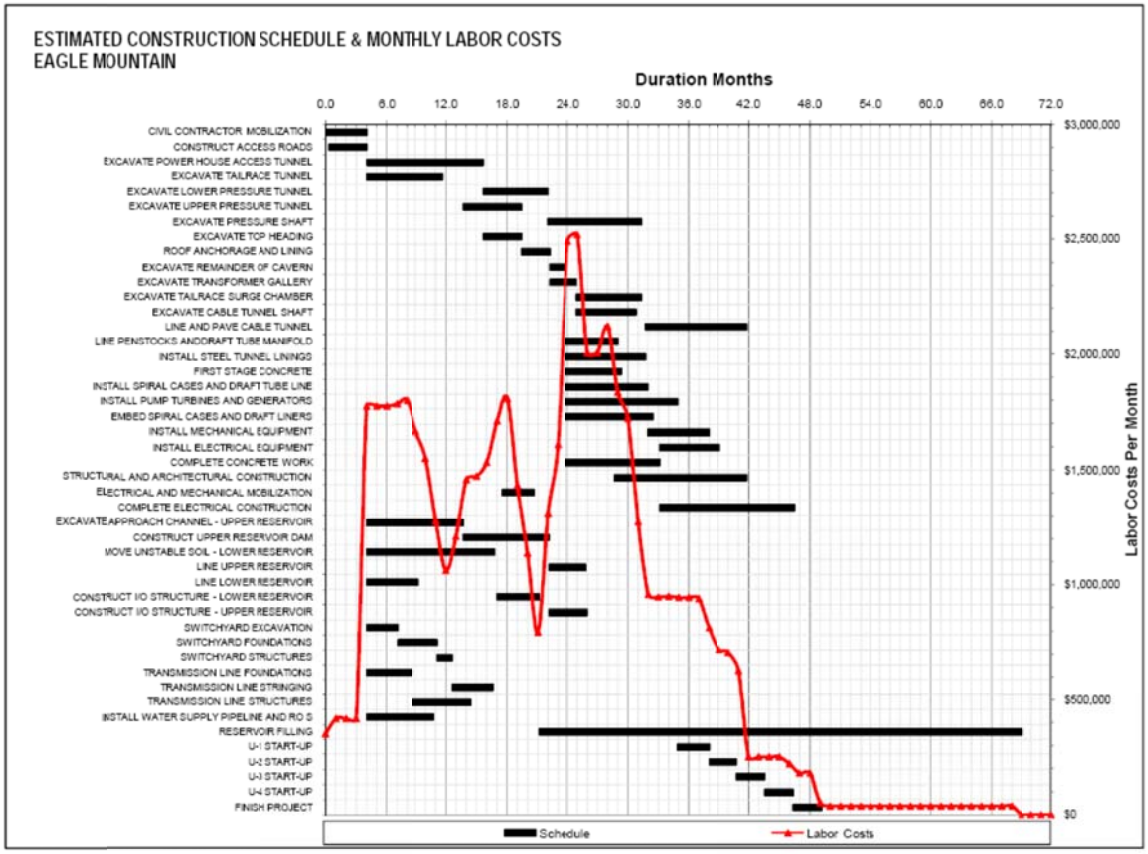


Table 3.11-4. Labor Cost Projections by Year



The majority of required manpower is needed during the timeframe approximately 2 years into the construction period with considerably less needed in the first and last year. Peak monthly employment occurs in Year 2 with a high of 209.

Most of the general labor required during construction would likely be available from the labor pool within Riverside County and the Project region. As much as 50 percent of the skilled trades and management and support personnel could also be provided by regional labor. However, there would be some immigration of non-local workers to meet the Project labor requirements. Many of these employees will utilize regional housing in the Indio/Palm Desert area, or in the City of Blythe. Significant vacant housing and rental units are available within Riverside County as well as large numbers of hotel/motel rooms.

Current estimates of peak construction work force and the expected percentage of non-local workers suggest that during the peak period approximately 105 workers will require short-term (2 years) housing accommodations.

Total construction workforce payroll costs for the Project are estimated at $58,000,000. Additionally the Project is estimated to spend $39,085,000 on design engineering; $48,856,200 on construction administration and engineering; and $2,931,400 on legal and administrative

costs. The distribution of this payroll would fluctuate over time and would parallel the fluctuations in employment. Labor expenditures would be highest in Year 2.

3.11.3.3.2 *Community Infrastructure and Services*

The population of Eagle Mountain in 1980 was 1,890 with 914 dwelling units. Presently (2010), the privately owned town of Eagle Mountain is not used for housing. The Eagle Mountain Landfill and Recycling Center EIS/EIR (CH2M Hill, 1996) showed there were 410 housing sites with 347 detached single-family homes, 14 partial residential structures, and 49 residential foundations/slabs. The Eagle Mountain Landfill and Recycling Center is proposing to reopen the townsite for permanent housing, however, the Eagle Mountain Pumped Storage Project is not proposing to utilize the townsite for housing. Also, there are more than 25,000 vacant housing units and 12,000 vacant rental units within Riverside County (Census, 2005-2007). In addition, there are approximately 11,599 hotel/motel rooms within the communities of Blythe, Cathedral City, Palm Desert, Palm Springs and Indio (Riverside County, 2004). Thus, there exists sufficient housing potential to accommodate the non-local construction work force.

Medical facilities also appear to be adequate with one bed per approximately 645 people within Riverside County. In addition, Riverside County operates a full-time fire station in Lake Tamarisk. The development will be required to follow the Development Impact Fee Program as adopted by Riverside County to assess impact fees for the fire district. Because no new housing construction is anticipated, it is expected that existing regional public services (water, sewer, waste) will meet the Project-related workforce population.

3.11.3.3.3 *Costs*

Riverside County Service Area (CSA) 51 consists of the communities of Desert Center, Lake Tamarisk, and Eagle Mountain. CSA 51 provides water, sewer, and trash disposal to these communities.

Increased demand for these services from the proposed Project is expected to be small. No on-site work camp or housing will be used. Non-local construction workers will live off-site in existing units within several Project-region options as described above.

Because of the anticipated small impact on municipal services and infrastructure, the impact on local municipal costs during construction is expected to be insignificant; further, as described below, it will be enhanced by anticipated tax revenues.

3.11.3.3.4 *Revenues*

The Project will contribute to the revenues of Riverside County and local governments primarily through the collection of property tax and sales and use taxes. Construction of the Project would increase property tax revenues to Riverside County. The assessed valuation of the Project would rise on an annual basis, in proportion to the work completed. Property tax revenues would increase accordingly. Based upon the construction cost estimate and tax schedule, the property

taxes are expected to rise to approximately $8,390,000 (2008 Dollars) per year at the time of Project completion.

The sales tax rate for Riverside County is 8.750 percent. Sales tax is imposed on the sale of tangible personal property and specified services. Much of the materials and equipment for the Project could fall into this category. Therefore, substantial sales tax revenues could be generated from the Project.

3.11.3.3.5 *Indirect and Induced Impacts of Project Construction*

In addition to the direct economic impact of the Project on employment, income, and government revenues, the Project would have secondary economic impacts. These include indirect impacts resulting from the construction and operation workforce and the purchase of materials and supplies. Measurements of this additional indirect impact are applied to employment and gross multipliers.

For construction activity of this type, gross output multipliers often range from 1.0 to 1.5. This means for every dollar spent on materials and supplies, the spin-off indirect impact accounts for an additional $1.00 to $1.50. To the extent purchases are made outside of the region, this multiplier may be lower.

Employment multipliers range from 1.0 to 1.5 for construction projects. This means for every construction job created, another 1.0 to 1.5 job(s) will be created in the retail, service, and non-basic employment sectors.

3.11.3.3.6 *Operations*

Socioeconomic benefits derived, particularly from the property taxes, will be significant to Riverside County and local municipalities. The following sections discuss the Project's impacts in terms of annual employment, labor income, purchase of materials, tax revenues, and public service costs over its operating life. The Project estimates an annual operating budget of $28.3 million (2009 Dollars).

There will be no displacement of residences or business establishments due to operation of the Project. An estimated 30 persons will manage, operate, and maintain the Project. Each day will be divided into two 15-person shifts. The total staff requirement per shift includes three management personnel, seven engineers, two power plant operators, one maintenance technician and two administrative staff. Estimated annual labor operations and maintenance (O&M) cost (operations staff + home office administration) is $2.3 million (2009 Dollars). Various employment and fiscal benefits will result. Although slight employment growth would occur, the Project's operation will not significantly grow the local employment base.

Purchases of Materials. The annual O&M budget for plant supplies and parts is $2.5 million. Purchase of supplies and parts within the region will add annual local economic benefits.

Impacts on Local Government Finances. The Project will not have any significant ongoing impacts on local/county government costs. The relatively small labor force is unlikely to create any impacts on housing, schools, and other public services within the Project area.

Tax revenues from property tax will escalate relative to the value of the Project during construction. At completion, the Project will generate approximately $7.67 million per year in property tax revenue. Sales tax will decrease following completion. However, sales tax revenue will be generated from the operation and maintenance of the facility. Using the Riverside County sales tax of 7.75 percent, approximately $187,500 in annual sales tax revenue could be generated from the purchasing of plant supplies and parts.

3.11.3.3.7 *Indirect and Induced Effects on Ongoing Expenditures*

The ongoing expenditures for materials, services, and employment will generate indirect benefits within the region in the same manner as described under construction stage impacts. The implementation of the Project and present and future multipliers applicable to employment and expenditures on the operation of an energy storage project are likely to be quite different from those associated with expenditures and employment during construction. The operation phase will have a consistent workforce and yearly expenditures that differ significantly from the fluctuations of the larger construction workforce. The multiplier impacts are likely to be similar to those associated with the operation of other utilities in the region.

The typical multiplier for utilities operations is 1.5 for employment. Therefore, the operations workforce of 30 personnel may generate up to an additional 45 indirect or secondary jobs.

Indirect impacts of the Project include employment increases in retail, service, and other sectors and revenue increases as a result of the purchase of materials and supplies.

Environmental Impact Assessment Summary:

(a) *Would the project induce substantial population growth in an area, either directly or indirectly?* No. Peak employment during construction is estimated to be 209 persons. Most of the general labor required during construction would likely be available from the labor pool within Riverside County and the Project region. As much as 50 percent of the skilled trades and management and support personnel could also be provided by regional labor. The Project may import some non-regional workers; however, these workers would be temporary and would not add substantially to the population. Similarly, during Project operation, only about 30 persons will be employed, which would not substantially increase population growth either directly or indirectly. Therefore, this impact would be *less than significant* and no mitigation would be required.

(b) *Would the project displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere?* No. Because the Project area consists of mining pits and is uninhabited, the Project would not displace any people or housing. Therefore no replacement housing, resulting in any physical changes elsewhere, would be

needed. Therefore, this impact would be less than significant and no mitigation would be required.

Impact 3.11-1 Residential or Business Displacement during Construction. Implementation of the Project will not displace significant number of people, affect existing housing or business establishments, or require replacement housing elsewhere. Therefore, this impact is considered *less than significant* and no mitigation is required.

Impact 3.11-2 Impacts on Community Infrastructure and Services. Because of the available infrastructure capacity within the region, the Project would not require construction of significant additional infrastructure. Therefore, this impact is considered *less than significant* and no mitigation is required.

Impact 3.11-3 Impacts on Local Government Finances. This impact is *less than significant.* Payment of Riverside County Development Impact fees is required (*see* MM LU-1). In addition, purchase of construction materials and equipment required to construct the Project would increase local and regional tax bases. The substantial sales tax revenues would be considered beneficial impact as a direct result of Project implementation.

3.11.4 Mitigation Program

No significant population or housing impacts have been identified for the proposed Project, and therefore no mitigation is required. The Project is expected to generate incremental growth along with concomitant jobs, government revenue and commercial activity. There will be a spike in economic activity during construction that will diminish to low but sustained levels during operation.

3.11.5 Level of Impact after Implementation of the Mitigation Program

No significant population or housing impacts have been identified for the proposed Project, and therefore no mitigation is required.

No residual population or housing impacts would occur with implementation of the proposed Project.