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## 4.5 Induced Socio-Economic Impacts (Growth Inducement)

### 4.5.1 Introduction

The induced socio-economic impacts analysis addresses the extent to which the Master Plan alternatives would foster economic and population growth, which would result in the construction of new housing or other land use development that could directly or indirectly cause significant effects on the environment. The potential for project-induced growth to trigger construction of new public service or utility infrastructure or to remove obstacles to growth is also assessed, as more fully described in Section 4.5, *Induced Socio-Economic Impacts (Growth Inducement)* (subsection 4.5.1), of the Draft EIS/EIR. This analysis is based on the evaluation of employment growth and economic output provided in Section 4.4.1, *Employment/Socio-Economics*, of this Supplement to the Draft EIS/EIR.

### 4.5.2 General Approach and Methodology

The analysis of induced socio-economic impacts presented below is based on the general approach and methodology described in Section 4.5, *Induced Socio-Economic Impacts (Growth Inducement)* (subsection 4.5.2), of the Draft EIS/EIR. Updated information relating to the methodology described in the Draft EIS/EIR follows. In addition, the analysis completed for this Supplement to the Draft EIS/EIR includes consideration of changes to baseline conditions (see Section 4.5.3 below).

- ◆ The Southern California Association of Governments (SCAG) *Regional Transportation Plan (RTP)* was updated in 2001 and incorporated revised population, housing, and employment growth projections due to acknowledged overestimates in the 1998 RTP. The differences between the RTP forecasts vary throughout the region and are not substantial for all geographic areas.<sup>103</sup> Although growth resulting from Master Plan implementation could constitute a slightly larger proportion of growth projected in the 2001 RTP for certain geographic areas as compared with that projected in the 1998 RTP, the significance of growth inducing impacts identified in Section 4.5, *Induced Socio-Economic Impacts (Growth Inducement)*, of the Draft EIS/EIR would not change. Therefore, for ease of comparing the impacts associated with Alternative D with those of the No Action/No Project Alternative and Alternatives A, B, and C, the 1998 RTP growth forecasts are utilized in this analysis. Employment, population, and housing numbers, and associated methodology are presented more fully in Technical Report 5, *Economic Impacts Technical Report*, of the Draft EIS/EIR and Technical Report S-3, *Supplemental Economic Impacts Technical Report*,<sup>104</sup> of this Supplement to the Draft EIS/EIR.

### 4.5.3 Affected Environment/Environmental Baseline

The affected environment/environmental baseline related to induced socio-economic growth used in this Supplement to the Draft EIS/EIR is the same as described in Section 4.5, *Induced Socio-Economic Impacts (Growth Inducement)* (subsection 4.5.3), of the Draft EIS/EIR. Evaluation of Year 2000 conditions indicated that no material changes to the affected environment/environmental baseline have occurred that alter the conclusions of the Draft EIS/EIR. However, changes in socio-economic conditions pertaining to the understanding and analysis of the affected environment/environmental baseline include the following:

- ◆ By 2000, increased passenger and cargo activity at LAX accounted for \$65 billion in total direct economic output (gross sales) in the region and approximately 425,000 jobs. These changes do not alter the significance conclusions provided in Section 4.5, *Induced Socio-Economic Impacts (Growth Inducement)* (subsection 4.5.6), of the Draft EIS/EIR.

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<sup>103</sup> In certain geographic areas, the growth projections in the 1998 RTP were actually increased in the 2001 RTP.

<sup>104</sup> The 2000 U.S. Census journey-to-work data was not available at the time Technical Report S-3, *Supplemental Economic Impacts Technical Report*, of the Supplement to the Draft EIS/EIR was prepared by HR&A. Additionally, for ease of comparing the impacts associated with Alternative D with those of the No Action/No Project Alternative and Alternatives A, B, and C, 1990 Census data has been used in this analysis.

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### **4.5.4 Thresholds of Significance**

#### **4.5.4.1 CEQA Thresholds of Significance**

As stated in Section 4.5, *Induced Socio-Economic Impacts (Growth Inducement)* (subsection 4.5.4.1), of the Draft EIS/EIR, a significant impact would occur if the direct or indirect changes in the environment that may be caused by the particular build alternative would potentially result in one or more of the following:

- ◆ Directly or indirectly fostered population or economic growth that would cause significant physical impacts on the environment by triggering the need for development of substantial new land uses and/or associated public facilities or infrastructure.
- ◆ Removal of obstacles to population growth or new development that would lead to significant physical impacts on the environment (for example, extending a new highway or utility infrastructure into an undeveloped area, thereby resulting in housing growth and associated physical impacts).

These thresholds are utilized to address the growth-inducing impacts of the project. Both thresholds are derived from language contained in CEQA Guidelines, Section 15126.2(d). The thresholds are also consistent with guidance in FAA Order 5050.4A, *Airport Environmental Handbook*, which focuses on the potential for induced or secondary impacts on surrounding communities.

#### **4.5.4.2 Federal Standards**

As stated in Section 4.5, *Induced Socio-Economic Impacts (Growth Inducement)* (subsection 4.5.4.2), of the Draft EIS/EIR, there are no federal standards that define significance thresholds for induced socio-economic impacts.

### **4.5.5 Master Plan Commitments**

No Master Plan commitments for induced socio-economic impacts are proposed.

### **4.5.6 Environmental Consequences**

The environmental impacts associated with induced socio-economic growth under the No Action/No Project Alternative and Alternatives A, B, and C have not changed from those described in Section 4.5, *Induced Socio-Economic Impacts (Growth Inducement)* (subsection 4.5.6), of the Draft EIS/EIR.

#### **4.5.6.1 Alternative D - Enhanced Safety and Security Plan**

A complete description of the facilities associated with Alternative D is provided in Chapter 3, *Alternatives* (subsection 3.3.2), of this Supplement to the Draft EIS/EIR. Under Alternative D, cargo and passenger activity is especially pertinent to the evaluation of induced socio-economic impacts because they fuel job growth. The incremental change in overall direct jobs associated with Alternative D and related changes in population and housing estimated to result from on-airport employees is shown in **Table S4.5-1**, Net Change in Population, Households, Employment 1996-2015 LAX Master Plan Alternatives. Data for the No Action/No Project Alternative and Alternatives A, B, and C are also provided therein for comparison. The relationship of these changes to SCAG's growth forecasts, as well as their implications to growth-induced impacts, are discussed below. The SCAG forecasts for the three study areas are provided in Table 4.5-5, SCAG Forecast for Study Areas, Population, Households, Employment Growth 1996-2015, in Section 4.5, *Induced Socio-Economic Impacts (Growth Inducement)*, of the Draft EIS/EIR. The potential for Alternative D to remove obstacles to population growth or new development is also discussed below.

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Table S4.5-1

**Net Change in Population, Households, Employment 1996-2015  
LAX Master Plan Alternatives**

Area	No Action/No Project <sup>1, 2, 3</sup>			Alternatives A & B <sup>1, 3</sup>			Alternative C <sup>1, 3</sup>			Alternative D <sup>1, 2, 3</sup>		
	Emp.	HH	Pop.	Emp.	HH	Pop.	Emp.	HH	Pop.	Emp.	HH	Pop.
0- to 10-Mile Radius	-23,024	-3,814	-10,395	16,165	4,863	13,255	7,080	2,641	7,198	-22,845	-3,809	-10,382
0- to 20-Mile Radius	-44,897	-5,683	-15,939	31,522	7,247	20,325	13,805	3,935	11,037	-44,548	-5,676	-15,919
Five-County Region	-57,560	-43,208	-123,637	40,408	30,335	86,806	17,699	13,285	38,017	-57,113	-43,153	-123,479

- <sup>1</sup> Population and housing for the 10- and 20-mile radii are based on on-airport employment; for the five-county region, population and housing are based on total direct regional LAX employment. Population is lower than on-airport employment for 10- and 20-mile radii due to remote employee household locations.
- <sup>2</sup> Net employment declines are projected over the planning period due to productivity increases within manufacturing industries related to LAX that would outpace increases in employment associated with increases in air transportation activity. The decline in employment in each study area would have a corresponding effect on LAX-related population and housing.
- <sup>3</sup> Calculations based on projections of total economic output from the econometric forecasting model of the Los Angeles region developed by Regional Econometric Models, Inc. (REMI) (refer to Section 4.4.1, *Employment/Socio-Economics*, and Technical Report 5, *Economic Impacts Technical Report*, of the Draft EIS/EIR for further discussion).

Source: HR&A, Inc., 2003.

### **Job Growth**

Under Alternative D, LAX would yield a direct economic output of \$63.7 billion and total direct jobs of about 350,500 throughout the region by 2015, as discussed in Section 4.4.1, *Employment/Socio-Economics* (subsection 4.4.1.6.1), of this Supplement to the Draft EIS/EIR. Taking into account the multiplier effect described in the economic analysis, LAX's impact would be \$93.8 billion in total economic output and 629,000 jobs by 2015. Construction costs associated with the alternative would translate into an estimated 48,778 jobs, which, with the multiplier effect taken into consideration, translates to a total construction employment impact in the county of 102,244 jobs.

As shown in **Table S4.5-1**, the projected direct regional employment associated with Alternative D in 2015 represents a net decrease of 57,113 jobs compared to baseline (1996) conditions. This decrease would apply to all portions of the study area. The decline in employment over the planning period, in spite of increasing aviation activity, reflects productivity increases (i.e., producing more economic output per worker) within manufacturing industries related to LAX that would outpace increases in employment. Under Alternative D, similar to the other build alternatives, approximately 78 percent of LAX-related jobs (273,435) would be located within a 20-mile radius of LAX, and 40 percent (140,223) would be located within a 10-mile radius. However, given the projected net decrease in employment, Alternative D would have no meaningful contribution to the job growth forecast by SCAG for each of the geographic study areas for the 1996 to 2015 period. Consequently, induced growth resulting from increased employment levels would not occur, and impacts would be less than significant.

Alternative D is projected to support roughly the same level of employment as the No Action/No Project Alternative in 2015. Compared to the No Action/No Project Alternative, Alternative D would provide an estimated 447 more jobs in the five-county region, 349 more jobs within a 20-mile radius, and 178 more jobs within a 10-mile radius.

### **Population and Housing Growth**

Based on projected decreases in LAX related jobs under Alternative D due to productivity increases over the planning period, a total population of as much as 123,479 people in 43,153 households would be lost to the five-county region between 1996 and 2015, as shown in **Table S4.5-1**. Of this total, approximately 15,919 people (or 13 percent) in 5,676 households would be located within a 20-mile radius of LAX, and approximately 10,382 people (8 percent) would be located within a 10-mile radius, representing 3,809 households. Given the net change in population and housing, Alternative D would have no meaningful contribution to the growth forecast by SCAG for each of the geographic study areas for the 1996 to 2015 period. Consequently, growth induced by an increase in population would not occur.

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Alternative D would result in nearly the same level of indirect population and housing decline as the No Action/No Project Alternative, due primarily to similar reductions in employment expected over time. Compared to the No Action/No Project Alternative, Alternative D would retain an estimated 158 more people and 55 more households in the five-county region; 20 more people and 7 more households within a 20-mile radius; and 13 more people and 5 more households within a 10-mile radius.

### **Growth-Inducing Impacts**

SCAG's regional forecasts incorporate local- and county-level growth projections for each jurisdiction within the region. Regional transportation, utilities, schools, and other local and regional plans are based on this data. In light of the projections outlined above, it is clear that project-related declines in employment, population, and households between 1996 and 2015 would not contribute meaningfully to the forecast growth at both the regional and local levels.

### **Housing Development, Utilities, and Services**

With an estimated decrease in employment and associated population, Alternative D would not generate net new indirect demand for housing resources over the 1996 to 2015 period. Projected housing supplies within the study areas would thus remain largely unaffected by project development. The demand for public utilities and services associated with employee households and population would likewise decrease over the planning period, as shown in **Table S4.5-2**, Induced Growth Public Utility Demand - Alternative D (1996-2015), and **Table S4.5-3**, Induced Growth Public Service Demand - Alternative D (1996-2015). Determinations regarding the significance of this demand on the physical environment are evaluated under the cumulative impact discussions in Section 4.17.1, *Energy Supply*, Section 4.19, *Solid Waste*, Section 4.25, *Public Utilities*, Section 4.26, *Public Services*, and Section 4.27, *Schools*, of this Supplement to the Draft EIS/EIR. The projected reductions in utility and service demands would ultimately make additional supplies and resources available to other customers within the service areas of the various utility and service providers, which could be considered a beneficial impact. From a growth inducing standpoint, potential impacts on utilities and services are considered to be less than significant. Furthermore, long-range planning, impact fees, project-by-project review, and regulatory controls would also ensure that utility and service supplies would keep pace with forecast demand.

Since Alternative D would result in nearly the same level of decline in employment, indirect population, and housing as the No Action/No Project Alternative, similar decreases in demand for housing resources, public utilities, and services would also occur under each of the alternatives. The decline in demand for housing resources, public utilities, and services would be slightly greater under the No Action/No Project Alternative.

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**Table S4.5-2**

**Induced Growth Public Utility Demand - Alternative D (1996-2015)**

Area	Alternative D
<b>0- to 10-Mile Radius</b>	
Solid Waste <sup>1</sup> (tons/year)	-4,685
Water Use <sup>2</sup> (gallons/day)	-685,620
Wastewater <sup>3</sup> (gallons/day)	-685,620
Electricity <sup>4</sup> (megawatt hours/year)	-21,431
Natural Gas <sup>5</sup> (thousand cubic feet/year)	-304,644
<b>Five-County Region</b>	
Solid Waste <sup>1</sup> (tons/year)	-53,078
Water Use <sup>2</sup> (gallons/day)	-7,767,540
Wastewater <sup>3</sup> (gallons/day)	-7,767,540
Electricity <sup>4</sup> (megawatt hours/year)	-242,800
Natural Gas <sup>5</sup> (thousand cubic feet/year)	-3,451,377

<sup>1</sup> Based on a factor of 1.23 tons per year per dwelling unit. (See Technical Report S-7, *Supplemental Solid Waste Technical Report*.)

<sup>2</sup> Based on a factor of 180 gallons per day per dwelling unit. (See Technical Report 15, *Public Utilities Technical Report*, of the Draft EIS/EIR.)

<sup>3</sup> Based on a factor of 180 gallons per day per dwelling unit. (See Technical Report 15, *Public Utilities Technical Report*, of the Draft EIS/EIR.)

<sup>4</sup> Based on a factor of 5.6265 megawatt hours (MWH) per dwelling unit per year. (See Technical Report S-6, *Supplemental Energy Supply Technical Report*.)

<sup>5</sup> Based on a factor of 79.980 thousand cubic feet per dwelling unit per year. (See Technical Report S-6, *Supplemental Energy Supply Technical Report*.)

Source: PCR Services Corporation, 2003.

**Table S4.5-3**

**Induced Growth Public Service Demand - Alternative D (1996-2015)**

Area	Alternative D
<b>0- to 10-Mile Radius</b>	
Fire Protection <sup>1</sup> (staff)	-10
Law Enforcement <sup>2</sup> (sworn officers)	-42
Parks and Recreation <sup>3</sup> (acres)	-31
Libraries <sup>4</sup> (square feet)	-5,191
Schools <sup>5</sup> (students generated)	-1,486
<b>Five-County Region</b>	
Fire Protection <sup>1</sup> (staff)	-123
Law Enforcement <sup>2</sup> (sworn officers)	-494
Parks and Recreation <sup>3</sup> (acres)	-370
Libraries <sup>4</sup> (square feet)	-61,740
Schools <sup>5</sup> (students generated)	-16,830

<sup>1</sup> Based on a factor of 1 staff per 1,000 population.

<sup>2</sup> Based on a factor of 4 sworn officers per 1,000 population.

<sup>3</sup> Based on a factor of 3 acres per 1,000 population.

<sup>4</sup> Based on a factor of 0.5 square feet per 1 population.

<sup>5</sup> Based on a factor of 0.39 students per dwelling unit.

Source: PCR Services Corporation, 2003.

### Industrial Development

As under the other build alternatives, there is potential for growth-inducing effects in the immediate vicinity of LAX due to increases in cargo movement through the airport associated with Alternative D. If greater volumes of cargo are processed at LAX, it is expected that demand for warehousing and industrial space would increase in surrounding areas. Currently, there is a very limited supply of industrial space in the area due to very low vacancy rates, with only 500,000 SF of vacant industrial building space

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available in the LAX/El Segundo/Hawthorne area in the first quarter of 2000.<sup>105</sup> Through proposed acquisition, Alternative D would deplete the total supply of industrial space in the LAX vicinity by approximately 17 acres, compared to 123 acres under Alternative A, 170 acres under Alternative B, and 91 acres under Alternative C (see Section 4.4.2, *Relocation of Residences or Businesses* (subsection 4.4.2.6), for further discussion). This combination of factors could result in redevelopment and intensification of existing industrial properties or in the conversion or recycling of other land uses, both of which would in turn result in physical impacts on the environment.

As with Alternatives A, B, and C, it is possible that much of this demand could be met nearby in the City of Inglewood, in light of General Plan goals and City plans to expand industrial operations and employment. To the extent that induced demand in other jurisdictions would exceed available supply within industrially designated and zoned land, proposed industrial development in those instances would be subject to discretionary approval by these jurisdictions and, therefore, would require environmental review. The potential for project-induced demand for industrial development to result in impacts is, therefore, considered to be less than significant.

Alternative D would accommodate the same level of increased cargo activity as the No Action/No Project Alternative, thereby inducing a similar level of demand for warehousing and industrial space in surrounding areas. However, since the No Action/No Project Alternative would not involve the acquisition of any industrial property as would occur under Alternative D, Alternative D could result in greater intensification of existing industrial properties in the area or a greater potential for the conversion or recycling of other land uses.

### **Removal of Obstacles**

Alternative D is not expected to remove obstacles to population growth. Infrastructure would not be expanded or extended into under-developed or undeveloped areas. While expansion of LAX would accommodate a portion of the region's market-driven demand for passengers and cargo, it would do so without a meaningful change in the capacity of the airport. Furthermore, Alternative D would not result in employment and population growth that is in conflict with local and regional forecasts. Therefore, potential impacts associated with the removal of obstacles to population growth are considered to be less than significant. Such impacts would be similar to the No Action/No Project Alternative, and would not remove obstacles to growth or open up new areas to population growth.

### **4.5.7 Cumulative Impacts**

The analysis of growth-inducing effects accounts for forecasted growth both locally and regionally. As a result, cumulative impacts associated with the No Action/No Project Alternative and Alternatives A, B, and C are addressed in Section 4.5, *Induced Socio-Economic Impacts (Growth Inducement)* (subsection 4.5.6), of the Draft EIS/EIR; cumulative impacts associated with Alternative D are addressed by the preceding analysis (Section 4.5.6.1).

### **4.5.8 Mitigation Measures**

Alternatives A, B, C, and D would not have a significant impact on induced socio-economics (growth inducement); therefore, no mitigation is required.

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<sup>105</sup> Colliers Seeley, *First Quarter 2000 Industrial Market Watch, South Bay, 2000*.