

This section describes the anticipated changes in population and employment that could result from implementation of the proposed LRDP. It also presents existing population and employment figures for Merced County and the projected changes in these variables as a result of overall regional development.

Project-related population and employment changes are estimated on the basis of project-specific data and assumptions. Changes in regional population and employment are characterized on the basis of data from the U.S. Census, the California Department of Finance, the Merced County Association of Governments (MCAG), and Merced County.

The anticipated increases in population and employment are discussed for informational and background purposes in this section. The increases discussed in this section provide the basis for the environmental analysis contained in Section 4 of this EIR. The secondary physical environmental impacts of the increases in population and employment, to the extent they would occur, are considered in Section 4, such as transportation, air quality, and noise. The data in this section also provide the basis for the population-related impact analysis in Section 4, such as demand for housing, utilities, and public services. To the extent that the population and employment increases due to the implementation of the LRDP induce substantial growth or concentration of population, the potential effects are addressed in Section 6, Growth Inducement.

This section also includes a discussion of the population and employment characteristics of the University Community, a related project proposed by the County to accommodate the population growth anticipated to result from the establishment of the new campus. As described in Section 2.13, the County plans to amend its General Plan to designate about 2,100 acres of land to the south of the proposed campus for development as a community that would provide housing and other urban amenities to the new population added to the region as a result of the campus. Because that project is proposed in response to the University's new campus, any population and employment changes that it might in turn trigger are also considered in the discussion that follows.

3.1 POPULATION

3.1.1 Existing and Projected Population in the County

Demographic data were obtained from a variety of statistical sources. These include the 2000 U.S. Census, the California Department of Finance (DOF), and the Merced County Association of Governments.

As shown in Table 3-1, the 2000 US Census indicates that the total population of the County is about 210,554 persons. According to the census, at 77,927, the population in unincorporated County comprises 37 percent of the total. The population of the City of Merced is 63,893, or about 30 percent of the County's total population. The next largest city in Merced County is Atwater, where 23,113, or approximately 11 percent of the County population, resides.

DOF estimates a total 2000 County population of 210,138 which is very slightly lower than the census number. The Merced County Association of Governments (MCAG) estimates the 2000 county population at about 215,256 persons, which is about 2 percent higher than the census number.

Table 3-1
2000 Existing Population in Merced County

	Merced County Association of Governments	DOF Projections (extrapolated from 1990 Census)	2000 Census Population Data
City of Merced	70,544	63,330	63,893
City of Atwater	28,545	22,566	23,113
Other Cities	45,547	42,698	45,621
Total Cities	144,636	128,594	132,627
Unincorporated Area	70,620	81,544	77,927
Total Merced County	215,256	210,138	210,554

Source: MCAG, 2001; DOF, 2000; U.S. Census 2000.
Other cities: Dos Palos, Gustine, Livingston, and Los Baños

MCAG has calculated growth rates with and without the proposed campus. MCAG projections are based on an average annual growth rate of 2.3 percent for the County as a whole. The Merced County Association of Governments currently estimates that without the development of the campus, the population of the unincorporated part of Merced County would increase to 99,320 in 2025.

Table 3-2
Current Merced County Population Projections

Jurisdiction	Projected growth rate	2000	2005	2010	2015	2020	2025
UC Merced and UC community	--	0	384	3,088	8,220	14,066	21,682
Other Unincorp. Area	0.9–7.1%	70,620	75,754	81,094	6,203	92,519	99,320
Unincorporated Total		70,620	76,138	84,182	94,423	106,585	121,002
City of Merced	2.2%	70,544	81,263	92,014	100,706	108,505	115,346
City of Atwater	1.2%	28,545	31,557	34,291	35,798	36,468	36,430
All other cities	1.5–4.0%	45,547	53,888	63,436	73,857	86,377	100,392
Total Cities		144,636	166,708	189,741	210,361	231,350	252,168
Grand Total: Cities, Unincorporated and UC	2.3%	215,256	242,846	273,923	304,784	337,935	373,170
Department of Finance (July 1, 2001)		214,400	239,900	266,700	292,400	322,700	N/A

Source: Merced County Association of Governments, 2001. Explanation of growth rate supplied by MCAG, May 18, 2001; Department of Finance, 2001b.

It should be noted that the current MCAG projections, shown in Table 3-2, are lower than the projections that were used in 1995 when the SSEIR was prepared. A decade ago, it was believed the population in Merced County and its cities would grow much more than has actually been the case. For example, in the 1990s, the City of Merced projected that the population in the SUDP would grow to 84,940 persons by 2000. The U.S. Census figure is about 25 percent less. The City of Merced General Plan prepared in 1997 projected that the population of the City of Merced SUDP would increase to between 133,250 and 145,350 inhabitants in 2015, and would

rise to as much as 239,200 in 2035. This can be contrasted with current MCAG projections, which show the population of the City of Merced increasing only to 100,706 by 2015 (Table 3-2). Similarly, in the 1990s, it was projected that the population for the unincorporated part of Merced County would be 87,452 by 2000. The current estimate is 70,620, or 19 percent less.

3.1.2 Project-Related Population Changes

The establishment of a large institution such as a major research university campus is known to result in substantial growth in a region's population and employment. Because the service area of a large university campus is often the entire state, a new campus can be expected to draw students from both the region where it is located and other parts of the state and country. Similarly, faculty and staff may also be drawn from the region, as well as other parts of the state and country. In addition to these direct population changes that would result as these nonlocal students, faculty and staff, and their dependents relocate into Merced County, additional changes in population can result as campus-serving businesses or other population-serving businesses move into the area in response to increased demand. These direct and indirect population changes due to the proposed project are described below.

3.1.2.1 *Total Campus Population*

Table 2-1 in Section 2 presents the projected increases in campus enrollment from the campus opening year 2004–05 through full development under the LRDP. Based on Department of Finance population projections, in the early years of the new campus (2004 through approximately 2010) enrollment is projected to increase annually at the rate of about 800 students. After 2010, the growth rate is projected to level off somewhat, and campus enrollment is projected to increase by about 530 students each year. Based on these rates, the campus under the LRDP is expected to reach full development (i.e., an enrollment level of 25,000 FTE students) about 46 years from opening. Campus population for selected years is presented in Table 3-3.

The University of California estimates that faculty and staff growth would accompany the growth in enrollment, using a ratio of 17.6 students to every faculty position, and a ratio of 3 to 4 staff positions for every faculty position on campus. Based on factors that are representative of other UC campuses, faculty on campus is projected to increase from approximately 100 in 2004 to 462 by 2015, and to 1,420 at full development under the current LRDP. It should be noted that in the early years, the student-to-faculty ratios may be higher than 17.6 to 1, that is, there may be proportionally more faculty than students. Similarly, the staff-to-faculty ratio is expected to be about 4 to 1 in the early years but would drop to about 3 to 1 during the later years.

Table 3-3
University of California, Merced Campus, Projections of Students,
Faculty, and Staff FTE (Selected Years)

Population	Years							Full Development
	2004/5	2007/8	2009/10	2010/11	2014/15	2024/25	2026/27	
Undergraduate	900	3,238	4,675	5,394	7,241	11,958	12,901	22,250
Graduate	104	374	539	622	895	1,478	1,595	2,750
<i>Subtotal</i>	<i>1,004</i>	<i>3,612</i>	<i>5,214</i>	<i>6,016</i>	<i>8,136</i>	<i>13,346</i>	<i>14,496</i>	<i>25,000</i>
Faculty	100	241	316	342	462	763	823	1,420
Staff	400	940	1232	1,334	1,617	2,670	2,799	4828
<i>Subtotal</i>	<i>500</i>	<i>1,181</i>	<i>1548</i>	<i>1,676</i>	<i>2,079</i>	<i>3,433</i>	<i>3,622</i>	<i>6,248</i>
<i>Total</i>	<i>1,504</i>	<i>4,793</i>	<i>6,762</i>	<i>7,692</i>	<i>10,215</i>	<i>16,869</i>	<i>18,118</i>	<i>31,248</i>

3.1.2.2 On-Campus Residential Population

The LRDP includes goals with respect to housing of students and faculty on campus. Based on UC experience at other campus, living on campus is very important to the entire educational experience. The LRDP states that the campus has a goal to provide on-campus housing to 50 percent of the students and faculty at full development, and consistent with these goals, the LRDP Land Use Diagram designates land for the development of the required housing units (5,128 single and multifamily units) to meet these goals. If these goals were achieved, at full development 12,500 students and 710 faculty would reside on campus. Dependents are expected to accompany a small percentage of the on-campus students (about 10 percent) and the majority of on-campus faculty. Assuming an average household size¹ of 2.5 for faculty and an average household size of 2.5 for students with families, at full development the on-campus students and faculty would have a total of 2,940 dependents who would also reside on campus. Table 3-4 presents total campus population and students, faculty, and dependents expected to live on campus for selected years. The data in the table assume that in the interim years, the campus would be below its goal of 50 percent of faculty in on-campus housing.

¹ This EIR uses a household size of 2.5 persons for all faculty and staff associated with the proposed campus, and for student families. This number is based on a survey of faculty household size conducted at UC Berkeley and is considered representative of UC-affiliated faculty and staff households. It is considered a high estimate for student families but has been used in the EIR to provide a conservative estimate of the population increase due to the campus.

**Table 3-4
On-Campus Population Estimates (Selected Years)**

	Years						
	2004/05	2007/8	2010/11	2014/15	2024/25	2026/27	Full Development
Total Students	1,004	3,612	6,016	8,136	13,436	14,496	25,000
Students in On-Campus Housing							
Single Students	592	1,625	2,707	3,661	6,046	6,523	11,250
Students w/families	0	181	301	407	672	752	1,250
Dependents of students	0	271	451	610	1,008	1,087	1,875
Subtotal	592	2,077	3,459	4,678	7,726	8,335	14,375
Total Faculty	100	241	342	462	763	823	1,420
Faculty living on campus	0	0	0	0	0	206	710
Dependents of faculty on campus	0	0	0	0	0	309	1,065
Subtotal	0	0	0	0	0	514	1,775
Total Living on Campus	592	2,077	3,459	4,678	7,726	8,850	16,150

Notes:

- 1) Assumes 50% of student population residing on campus for all years except opening year. Opening year numbers based on student bed data.
- 2) Assumes no faculty living on campus until student population is 15,000 (around 2026–27). Then 25% of faculty on campus in that year and 50% at full development.
- 3) Assumes faculty household size of 2.5 persons, and students with families also with an average household size of 2.5 persons.

It should be noted that there is some uncertainty with respect to these estimates for two reasons. First, because campus housing is not state funded, it is difficult to predict when the required housing would become available to allow the campus to provide housing to students and faculty at the desired level. Second, the University has found at other campuses that all those offered on-campus housing do not actually choose to live on campus. For these reasons, the actual number of students and faculty that live on campus at full development may be below the goals.

3.1.2.3 Off-Campus Residential Population

As noted above, if the University goals for housing 50 percent of students and faculty on campus are attained, the remainder of the campus population (12,500 students, 710 faculty, and 4,428 staff) at full development would reside off campus. About 10 percent of the total student population is expected to be existing residents of the area, and the remaining would be nonlocal and would move into available existing housing in the area.

If the average household size used for on-campus households is applied to the off-campus faculty, staff, and student families, the off-campus dependent population at full campus development is estimated to be 9,807 persons and the total off-campus non-local population is estimated to be about 25,345 persons. Table 3-5 presents the total off-campus population, assuming that the LRDP goals for on-campus student and faculty housing are achieved.

**Table 3-5
Distribution of Campus Population**

Population	Number of Persons (2007/08)	Number of Persons (2010/11)	Number of Persons (Full Development)
Students in Off-Campus Housing	1806	3,008	12,500
Commuters	361	602	2,500
Single Students	1,300	2,166	9,000
Students with families	144	241	1,000
Dependents of Students	217	361	1,500
Subtotal	1,662	2,767	11,500
Faculty in Off-Campus Housing			
Faculty	241	342	710
Dependents of Faculty	362	513	1,065
Subtotal	603	855	1,775
Staff in Off-Campus Housing			
Staff	940	1,334	4,428
Dependents of Staff	1,410	2,001	7,242
Subtotal	2,350	3,335	12,070
Total Off-Campus Population¹	4,614	6,957	25,345
Total On-Campus Population²	2,077	3,459	16,150
Total Campus-Related Nonlocal Population¹	6,692	10,416	41,495
Total Campus-Related Population³	7,053	11,018	43,995

¹Does not include commuter students.

²Numbers from Table 3-3.

³Includes commuter students.

In the early years of campus development, this off-campus population would live in existing and new housing that is developed in the region. However, as the University Community is developed, some or all of this population could live in the University Community. Some of the key assumptions used in developing University Community size are that 32 percent of the students would live on campus and about 10 percent of the students would be commuters (i.e., existing persons in the region who would enroll in the new campus), and therefore 58 percent of the student population and all of the faculty and staff would live off campus. The community has been sized for a total 11,616 housing units and a population of 30,782. By about 2015, the first phase of the University Community is projected to be completed, which would provide 1,152 housing units in the vicinity of the campus. By 2025, with phased development of the community, up to 4,020 housing units would be available, and at buildout of the University

Community, there would be 11,616 housing units added to the regional housing stock. Based on this manner of phasing and using a household size of 2.65 persons, the University Community would accommodate about 3,053 persons in 2015, 10,050 persons in 2025, and 30,782 persons at buildout. In the event that the campus surpasses the on-campus housing assumptions upon which the University Community was based, capacity would be available in the community for housing of additional growth not directly affiliated with the Campus, but potentially induced by campus-related growth.

According to Table 3-5, if the LRDP housing goals are achieved, at full campus development about 25,345 campus-related nonlocal persons would require off-campus housing. As discussed above, the University Community has been sized for a population of 30,782 persons. Therefore, there would be more than adequate housing available in the University Community to serve the campus at full development.

3.2 EMPLOYMENT

3.2.1 Existing and Projected Employment in the County

According to DOF statistics, there were approximately 52,000 nonagricultural jobs and 11,700 agricultural jobs in the county in 2000. Although only approximately 18 percent of the county's residents are employed in the agricultural industry, Merced County is ranked 6th nationwide for agricultural production. Trade was a larger employment industry for the county. Of the 52,000 nonagricultural jobs, 12,300 were in the trades. Other large employment sectors in the county were in state and local government, with 11,700 jobs and 10,800 jobs in manufacturing.

The City of Merced accounts for approximately 43 percent of the total jobs in Merced County. Retail, services, and local government sectors account for 68 percent of those jobs. Agriculture-related employment is relatively less significant for the City of Merced than for the county as a whole.

As shown in Table 3-6, projections to 2025 indicate that employment in Merced County will increase to 114,242 without UC Merced. Most of this employment growth would occur in the services and retail sector, which will provide 27 percent and 26 percent of all new jobs, respectively.

Table 3-6
Merced County Employment Projections: 2000 to 2025

	2000	2000 estimate	2005	2010	2015	2020	2025
Employment*	72,900	81,661	86,246	90,406	94,358	98,200	114,242
<i>Employment Growth Rate</i>	--	1.0%	1.1%	0.9%	0.9%	0.8%	3.1%

*Calculated without UCM

Sources: First column: DOF, 2001. In addition to 72,900 employed population, civilian labor force includes 12,300 unemployed persons, for a total labor force of 85,200. Other columns: Economics Background Report from the UC Merced, Draft, Appendix 5. Table 11, which was based on an assumption of 1.9 percent average annual growth rate. Employment Growth rate: Merced County Association of Governments, July 2000. Growth rate is the projected average annual growth rate over the preceding five-year interval.

According to the MCAG Regional Transportation Model, which is more updated than MCAG projections presented in Table 3-6, in 2025, there would be approximately 118,994 jobs in the county. If the jobs on the campus at full development (6,248) were added in, the County total would be 125,242.

3.2.2 Project-Related Employment Changes

3.2.2.1 Campus-Related Direct Employment

As shown in Table 3-2, the University would employ about 500 faculty and staff in the opening year (2004–05), this number would grow to about 2,079 by 2014–15, and at full development the University would employ about 6,248 faculty and staff.

3.2.2.2 Campus-Related Indirect and Induced Employment

In addition to the direct jobs on the campus, the operation of UC Merced would result in the creation of new indirect and induced jobs in the regional economy. Indirect jobs are those that would be created when the University purchases goods and services from businesses in the region, and induced jobs are those that are created or sustained when wage incomes of those employed in direct and indirect jobs are spent on the purchase of goods and services in the region. Indirect and induced jobs are a result of the income-multiplier process.

The total impact of UC Merced–generated expenditures on countywide employment was estimated using IMPLAN, a regional input-output model, and data from the U.S. Department of Commerce, Bureau of Economic Analysis. This model traces the linkages between the various sectors of a regional economy to determine the economic effect of a given change in the demand for goods and services. To estimate the economic impact of the campus, this study took into account the annual expenditures of the University on goods and services expected to be purchased in the region, the annual spending by faculty and staff households, the annual spending by the student population, and campus expenditures on construction projects. The analysis showed that the campus (at full development) would result in about 6,000 indirect and induced jobs in the regional economy. In the interim years, the number of indirect and induced jobs would be about 2,600 in 2005–06, about 2,050 in 2015–16, and about 4,000 in 2025–26. About 32 percent of these jobs would be, as expected, in wholesale and retail trade sectors, about 37 percent in services, about 11 percent in construction, and the balance distributed among other sectors (EPS, 2000).

3.2.2.3 Other Campus-Related Induced Employment

The direct, indirect, and induced growth triggered by the campus and described above captures the bulk of the changes in employment and population that would result from the implementation of the LRDP. However, additional growth can be expected to occur that cannot be readily quantified. The impacts of this growth combined with the quantifiable direct, indirect, and induced growth are discussed in Section 6.0, Growth Inducement.

3.3 DEMOGRAPHIC ASSUMPTIONS USED IN IMPACT ANALYSES

As stated earlier, the data in this section are presented primarily to inform the reader about the information that has been used in evaluating the impacts of the proposed project. The specific manner in which these data are utilized in Section 4 of this EIR is discussed below.

3.3.1 Scenario Analyzed in Sections 4.11, 4.12, and 4.15 of the EIR

The impacts analyzed in Sections 4.11, Population, Employment and Housing, 4.12, Public Services, and 4.15, Utilities, of the EIR are based on the assumptions that the on-campus population size would be 34,188 persons at full development. This would consist of all students, faculty and staff and the dependents of faculty and students who would live on campus. To estimate on-campus residents and their dependents, it was assumed that 50 percent of the students and faculty would reside on campus at full development. All estimates of demand for utilities and services have been prepared with this assumed population level. This scenario represents the most conservative case for impacts on water supply, wastewater conveyance and treatment, solid waste disposal, and public services.

3.3.2 Scenario Analyzed in Sections 4.3, 4.10, and 4.14 of the EIR

For the analysis of traffic impacts, and traffic-related air quality and noise impacts, this EIR does not assume that 50 percent of the students and faculty would live on campus. Rather, to provide a more conservative analysis, it assumes that at full campus development, 40 percent of the students and 30 percent of the faculty would live on campus, and all the staff and the remainder of the students and faculty would reside off campus and would commute to the campus.

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