

4.22 GROWTH-INDUCING IMPACTS

4.22.A Growth Effects Beyond Eastern Merced County

This response addresses comments LA7-2, LA10-2, LA10-5, and similar comments, which concern the potential for the proposed Campus to trigger growth in communities outside of Merced County. These comments are provided by Mariposa County and Mariposa County School District who contend that the Campus would result in an increase in Mariposa County's population and a related impact on the school district facilities.

The Draft EIR analyzes the growth that would be induced by the proposed Campus, in terms of a direct increase in area population as students, faculty, and staff relocate into the area with the establishment of the Campus, and indirect and induced increases that would occur when this new population/campus spends income in the area leading to more employment in population/campus serving businesses. The growth analysis assumes that about 10 percent of all students would be commuters, i.e., they would not be "new" to the area. With respect to faculty and staff, the Draft EIR notes that some of these positions would be expected to be filled by persons who are already residing in the region, but this percentage cannot reasonably be estimated and, therefore, the Draft EIR conservatively assumes that all faculty and staff would be new to the area.

With these assumptions, the Draft EIR estimates Campus-related growth and notes that the direct growth effects would be experienced primarily in Merced County. Although a few communities in Mariposa County such as Catheys Valley and Mariposa are within commuting distance of the Campus and, therefore, some faculty, students, and staff may choose to live there, the number of such persons would be expected to be small for the reasons discussed below.

As explained in the Draft EIR, it is estimated that full development of the UC Merced Campus will directly and indirectly lead to growth in new population of approximately 48,745 persons. This figure includes the new population due to the number of students, direct campus jobs, indirect and induced jobs, and other jobs associated with the Campus, together with the dependents of these students and job holders. The Campus is planning to provide housing for up to 50 percent of the students and faculty, and their dependents, at full development, or about 16,150 persons. Based on experience at other campuses, it is reasonable to assume that this housing would be fully occupied. Furthermore, Merced County is planning the University Community adjacent to the Campus, which is sized to accommodate 30,782 persons. The planned on-campus housing together with the housing planned for the University Community will be sufficient to accommodate the housing demand associated with all of the direct population growth attributable to the University, which includes students, faculty, staff, and their dependents. In addition, the housing planned for the University Community will be sufficient to also accommodate a significant portion of the indirect population growth (as much as 75 percent) associated with the University.

The University and the County acknowledge that not all Campus-affiliated persons would necessarily live in the University Community and may choose to live in other communities. However, the housing proposed for the Campus and the University Community will together add sufficient housing to the stock of other housing available in the County so that, on an areawide basis, only a small amount of housing demand will be generated in excess of the supply proposed to be provided. As a result, a significant amount of additional housing will not need to be

developed in response to the increase in areawide housing demand that will result from UC Merced. To the extent some additional housing demand is generated beyond the amount that can be satisfied by the housing proposed for the Campus and the Community, ample housing resources (existing and planned) are available within the nearby communities of Merced and Atwater to absorb that demand.

Residential location decisions are based on a number of factors including housing availability and prices, desire to minimize commute time and distance, and personal preferences. Because of its proximity and integration with the Campus, the University Community would be expected to capture most of those persons who are not accommodated on the Campus. It is possible that some Campus-related persons may choose to live in more rural communities in Merced or Mariposa counties because they prefer that setting. But it is reasonable to assume that the vast majority would like to be near work and school to minimize the loss of time traveling between the Campus and their homes. Based on the availability of planned and existing housing that would be either on or very near the Campus, the number of persons who may locate in more distant communities is not expected to be large. The University notes that Mariposa County's statement that Merced County and city employees reside in Mariposa County is evidence only of the fact that the commuting distance is reasonable. It does not necessarily mean that new persons who moved into this area took up jobs in Merced County but chose to live in Mariposa County. These employees could be existing Mariposa County residents who found jobs in Merced County. In any event, as explained above, given the County's proposed University Community, the Campus will not cause new significant growth in Mariposa County beyond the amount that would otherwise occur because the Community is sized to correspond with the demand for additional development generated by the University.

With respect to indirect effects that would result from the spending of income by the students, faculty, and staff, the Draft EIR reports the estimated number of indirect and induced jobs that would be created in the region and discounts for the leakage of income that would be expected because the Campus-related population would conduct some of their expenditures in communities outside of Merced County. The Draft EIR (page 6-7) notes that for goods and services not available in areas closeby, the Campus-related population would travel to other retail centers both within and outside Merced County and, therefore, some of the indirect and induced growth would occur in a much broader area. To the extent that opportunities for spending exist in Mariposa County, some of this effect could occur in Mariposa County communities. The Draft EIR explains that the physical effects of this indirect and induced growth would be limited because these jobs, which would be in retail and services, would not attract nonlocal population and many of these indirect and induced jobs would be filled by existing residents of the region. Regarding additional growth, which is often termed "spin-off" growth or the magnet/incubator effect of a university campus, please see Section 4.22.B below, which explains the uncertainty in predicting whether that would occur. Its geographical distribution would be even more uncertain.

Mariposa School District is referred to Section 4.16.B, which addresses concerns related to project impacts on regional schools.

4.22.B Induced Growth

This response addresses comments FA1-1, LA12-2, O31-17, SA12-4, SA12-6, SA13-10, SA13-11, and SA13-12, as well as other similar comments. Most of these comments request that the EIR include different projections of induced growth or hypothesize that growth would occur over and above the growth estimated and reported in the Draft EIR. Some question whether the Draft EIR combined the Campus with the University Community to examine growth effects.

The Draft EIR recognizes the potential for the Campus to serve as a long-term economic development catalyst in Merced County and the broader region. It is expected to alter both the type and the amount of employment growth that would occur in the region. The Draft EIR estimates and reports the increases in employment and the sectors of the economy where the increases would be most pronounced. The Draft EIR's quantitative analysis of growth effects is based upon an income multiplier-based assessment of effects within the economy of Merced County, acknowledging that some of the income effects would extend outside the County.

The Draft EIR analyses growth impacts in (1) the short term when the adjacent community would not be well developed and therefore the growth effects would occur in the wider region and (2) the long term when the University Community would be in place and would accommodate the growth in population and the demand for services from the increased Campus population. The University Community has been planned, designed, and sized specifically to absorb the direct and indirect population growth triggered by the Campus and includes both an adequate amount of housing and services to serve about 31,000 persons. The amount of land needed for housing was estimated based on the number and characteristics of the Campus-related population. The income multiplier process was used to identify the sectors of the economy that would be affected, and the kinds and amounts of services that would be needed. Following this step, acreage needed to provide these services within the University Community was estimated. Furthermore, as explained in the Draft EIR, the proposed community size is adequate not only to serve the new population attracted to the area by the Campus, but also a substantial amount of induced population growth (additional persons employed in businesses that would serve the Campus or the Campus-related population). Section 6 in the Draft EIR therefore addresses the combined growth effects of both projects, and all other sections of the Draft EIR address the combined effects of both projects on the regional resources including productive agricultural lands, air quality, traffic and circulation network, and biological resources.

The Draft EIR also notes that in the short term growth effects would occur in the existing communities. The Draft EIR describes the likely demand for housing by the Campus-related population and compares that to the available housing resources in the area. Based on this comparison the EIR concludes that the existing community resources would absorb the short-term growth impacts; therefore, this growth would not affect additional regional resources including productive farmland. With respect to long-term growth impacts, the Draft EIR acknowledges that secondary growth effects could occur in the nearby communities from purchase of products and services that are not available in the adjacent University Community and possibly some growth effects from additional housing in nearby communities from induced growth. However, it does not attempt to characterize the geographical pattern or the magnitude of this effect because of the uncertainty involved in reasonably predicting this long-term impact. Similar to spin-off growth, which is described below, numerous economic and social factors determine where people choose to reside and spend their incomes, and with the increased

mobility and improvements in technology, it has become increasingly difficult to predict growth patterns.

The Draft EIR does not attempt to estimate spin-off growth effects of the Campus but notes that some level of such effects could occur in the wider region around the Campus, probably in the long term. This “incubator/magnet” effect is noted in Section 6.2.3 of the Draft EIR, where it is explained that these phenomena cannot be predicted or quantified with any certainty at this time. Enormous uncertainty is associated with attempts to forecast the specific areas of research the University may focus on over the long term and the extent to which that research may or may not evolve into applications that can engender spin-off growth. This type of spin-off growth depends upon a number of factors besides the type of research conducted, all of which are uncertain, including (1) the programs, policies, reputation, and academic orientation of the Campus, (2) the evolution of the labor force and business environment in the area, and (3) national economic trends and forces affecting those industries attracted by university research.

A vast amount of economic literature exists on the process of technology transfer from universities that has facilitated or triggered regional economic growth. This body of literature focuses on the magnet and incubator effects of research institutions such as university campuses. These studies have focused on major campuses with the purposes of analyzing where, when, and under what circumstances this growth has occurred. These studies show that a specific combination of regional economic conditions is necessary for spin-off growth to occur. For instance, EPS examined the growth of spontaneous research parks/districts in the San Francisco Bay Area that were linked to the research university campuses in the region. The study noted that the Bay Area is somewhat of a unique example of such campus-related spin-off growth. This growth has occurred essentially in two sectors, computer technology and biotechnology, with the direct link of these sectors to the research programs at Stanford, UC San Francisco, and UC Berkeley. Specific economic factors that have fostered this growth include (1) the presence of a large highly skilled and diverse labor force, (2) availability of venture capital, (3) availability of business supportive environment and amenities including airports, financial services, and government institutions, and (4) the quality of life, a factor which is important to the highly mobile, educated work force in making location decisions (EPS 1997). Consultation with planners at UC Irvine, where spin-off growth effects have been observed, indicates that this growth is a consequence of the metropolitan location of this campus and the specific programs that the campus focuses on. The planner notes that this growth would have occurred in that area even without the campus at this location (Demerjian 2001).

Research understandably has not focused on university campuses that have not resulted in spin-off growth. Numerous examples of such campuses exist in the state and nationwide. Within California, limited or no spin-off growth is observed around CSU campuses or some of the UC campuses established in the 1960s. For instance, a small research park has only just begun to develop in Scott’s Valley that could be associated with UC Santa Cruz (although this particular instance of growth may also be influenced by the increased cost of land and facilities in Silicon Valley). No or very limited spin-off growth that can be linked to the campus is observed around UC Davis, UC Santa Barbara, or UC Riverside. UC Davis has indicated that despite the city’s effort (by establishing a research park near the campus) to encourage such growth, and the campus’s own effort to encourage this through the establishment of an Enterprise Reserve on campus, no campus-related businesses have so far located in either area, even though the campus has been in existence for more than 40 years (England 2001).

This review suggests that unless a specific set of conditions occur in Merced County, spin-off growth resulting in substantial population growth (and the concomitant conversion of agricultural land or open space to urban uses) would not occur. Another important factor to consider in this regard is that even if some spin-off businesses do establish in the Merced region, regional population may not increase proportionally, that is, limited immigration into the area may occur. A large portion of the County population currently outcommutes to other employment centers. With the establishment of spin-off businesses, many of these persons would likely seek employment locally. In summary, the phenomenon of spin-off growth cannot be predicted with any certainty and a set of very specific conditions must exist for it to occur. It would be speculative for this EIR to attempt to further characterize this impact.

The Draft EIR discusses the growth patterns in the region in Section 4.9, Land Use and Planning, including several subdivisions and other urban development projects that are planned or proposed in the area. The University understands that other improvement projects are also planned for the area including Merced Airport expansion. It would be speculative and inappropriate to treat proposed projects in the region as that are the result of ongoing regional growth as a consequence of UC Merced. With and without the Campus, the population of the County will continue to increase and will result in new development independent of the University. The University also notes that although land values would be expected to increase with the establishment of the Campus, because land values are determined by a host of factors including the state of the national and local economies, the effect of the Campus on land values cannot be reasonably estimated. Furthermore, under CEQA, such an analysis, if possible, would be pertinent only if it helped in the evaluation of a physical impact on the environment. It is unclear how land values would assist in the evaluation of the growth impacts of the project beyond what is analyzed in the Draft EIR.

Commenters request consideration of conservation easements within ½ mile of the Campus for purposes of controlling growth effects on productive agricultural land, and a concerted countywide planning effort to address the cumulative loss of agricultural land due to the growth of the Campus, University Community, and other projects in the area. The problems associated with conservation easements for purposes of growth control and why these are not necessary for the proposed Campus are discussed in Section 4.6.B. Furthermore, the UCP itself is proposed to control and channel the location of growth into the Community (see Section 4.22.C, below). Further, the County has developed numerous policies in the UCP Area Plan to address the growth effects on this portion of Merced County.

4.22.C Explanation of Land Requirements and Proposed Location of the University Community

This response addresses comments FA1-1, FA1-37, FA1-42, FA1-43, FA1-45, O28-67, O28-68, O28-73, and other similar comments, which question the need for the University Community to be developed in the location and in the configuration proposed; whether such a community is needed at all, given the availability of capacity in existing communities to absorb the population growth that would be triggered by the campus; and whether the community needs to be developed at the size proposed.

Section 2.13 in the Draft EIR describes the University Community project as a related project and explains that the project is proposed and sized to capture the population growth that would

be triggered directly and indirectly by the Campus. Additional information on the size of the University Community is provided in Section 3 of the Draft EIR. Section 5.2 explains why it is important that this community be located immediately adjacent to and planned to be integrated with the Campus. The discussion below provides further explanation about the need for an adjacent community.

4.22.C.1 *Size of the University Community*

A fundamental objective of the UCP is “to provide adequate land and development opportunities to absorb the equivalent of 100 percent of the new growth demand generated by UC Merced over time.” The development capacity of the UCP was specifically designed to account for a level of development equivalent to the new off-campus demand expected to be generated by the UC Merced Campus at projected enrollment of 25,000 students. (See UCP Draft EIR, page 6-6.)

During the planning process that resulted in the proposed UCP, an extensive economic analysis was undertaken of the effect of the UC Merced Campus on the local economy. These studies are reflected in the *Merced County University Community Plan/UC Merced Economic Background Report* prepared by Economic and Planning Systems (EPS 2000). Merced County used the projections in the *Economic Background Report* and related data produced by EPS in developing the land use plan for the UCP.

The *Economic Background Report* assessed the amount of growth that would occur as a result of the UC Merced Campus. The report takes into account direct population growth resulting from the University (students, faculty, staff, and their families) and direct employment at the University (UC Merced faculty and staff), at various points in time and at full development. The report also forecasts indirect employment by capturing the effect that both campus population and new expenditures by UC Merced will have on job generation. The indirect employment estimates were derived using an input/output model that projects the total countywide effect of expenditures in a particular sector of the economy. The model does this by measuring how expenditures by students, faculty, staff, and the University itself will increase demand for goods and services throughout the County, leading to the expansion of local business and a corresponding increase in indirect and induced County employment due to the multiplier effect. These results were then translated into the amount of additional space and the corresponding amount of land that would be needed for the jobs that would be generated in various sectors of the economy.

The amount of land set aside in the UCP for housing was based upon a projected need to develop 11,616 housing units. The County based this projection on the assumption that UC Merced would accommodate 25 percent of students on campus and no faculty or staff. The number of housing units planned for the University Community was designed to accommodate all *direct* housing demand generated by the University, assuming that all faculty and staff and 75 percent of the students would live off campus. (Note that the University now plans to provide a higher amount of housing on campus, enough to accommodate 50 percent of the students and 50 percent of the faculty. If this goal is reached, on-campus housing together with the housing planned for the University Community will be sufficient to accommodate almost all of the off-campus housing demand associated with all of the direct as well as *indirect* population growth associated with the University.)

The forecasts upon which the UCP is based are countywide job growth and housing-demand figures, which were used to calculate the amount of space, and ultimately the amount of land needed, to absorb such growth in jobs and such an increase in housing demand. Use of this methodology for making land use projections should not be taken to mean that all indirect and induced jobs will in fact be located within the University Community or that all University-affiliated persons living off campus will live in the University Community. Instead, the County used this methodology to ensure that the amount of land earmarked in the UCP for retail, commercial, service, office, research and development, and similar uses would be equivalent to the amount needed to satisfy the additional demand for such development generated by UC Merced-associated growth. By the same token, the amount of land earmarked for housing was designed to provide an amount of housing approximately equal to the increase in overall demand for housing in the County that would be generated by the University. Creating a planned development area designating sufficient land will adequately provide for the increase in development demand associated with UC Merced-generated growth. This in turn will prevent excessive demand for developable land, which could result in fragmented, poorly planned, or haphazard growth in other areas of the County.

Another basis for the size of the University Community relates to the County's overall goals and objectives for community design. As a matter of policy, the County favors development of a unitary, well-designed university community, rather than more scattered growth in smaller sub-communities that cannot be comprehensively planned, to meet the demand for growth that will be generated by the University. A university community of the size proposed provides the opportunity to develop an integrated and cohesive pattern of land uses and places enhancing the quality of the housing, businesses, community facilities and open spaces that are provided. The UCP envisions that providing housing, retail, offices, business centers, cultural facilities, parks, schools, and comparable uses adjacent to the University and close to one another will promote a high level of interactivity, socialization, and identity for the Community. A single planned University Community also provides an opportunity for a mix of uses and densities to create vital activity centers, while following standards for architecture and urban design that achieve a distinctive identity and quality. A key objective of the UCP is "to provide a community with patterns of land use and urban form that support principles of livable communities and environmental sustainability." The policies in the UCP, accordingly reflect urban design principles that include: development of a complete and integrated community containing housing, shops, work places, schools, parks, and civic facilities; a community designed so that housing, jobs, daily needs, and other activities are within easy walking distance of each other; a diversity of housing types to accommodate a wide range of economic levels and age groups; a focus area that combines commercial, civic, cultural, and recreational uses; and a well-defined edge boundary to the community. The University Community has also been carefully designed with environmental considerations in mind.

Some commenters suggest that a smaller University Community coupled with more diffuse satellite development spread among various unincorporated areas of the County, the City of Merced and areas such as Atwater and Livingston would be preferable. Addressing the growth associated with the University in this way is not favored by the County, however, because such a scheme would not provide social, aesthetic, cultural and environmental and other advantages, such as those described above, that can be provided by a comprehensively planned, integrated, and cohesively designed community. Dispersed and fragmented development would tend to be less well-planned, and could well result in greater impacts to natural resources than a well

planned and designed community, reflecting a comprehensive approach to urban design and resource protection, as is envisioned in the UCP. In addition, University-related development scattered in areas more distant from the Campus would lead to greater commute distances for students, faculty and staff than is expected with the UCP, exacerbating traffic congestion and the air pollution and energy use impacts associated with increased traffic and trip miles. It could also lead to unnecessary development of open space, and promote inefficient patterns of roadway and infrastructure development. An adjacent community, by contrast, allows for optimal planning of development patterns and infrastructure and provides opportunities for reducing infrastructure costs.

In addition, an important County objective is to ensure that the UCP is financially viable as a matter of public finance. Economic studies conducted as part of the planning for the University Community indicated that a minimum size and scale would be needed to support the costs of infrastructure and public services (schools, parks, police, fire, and so on) of a mixed use and integrated community seen as the University Community. Merced County's experts estimated that a community the size of the proposed University Community is needed to generate sufficient internal financial support.

4.22.C.2 *Location of the University Community Adjacent to the Campus*

The location of the University Community adjacent to the UC Merced Campus is the primary objective of the proposed UCP. To implement this overall objective, UCP policies call for community uses to be located adjacent to UC Merced to enhance the vitality and quality of University and Community life. As indicated in Chapter 2 of the UCP Draft EIR, the object of the UCP project is "to support the successful development of the University of California, Merced campus by providing for a community that is physically contiguous to the campus and which includes appropriate and sufficient housing, commercial, industrial/business park, civic, and open space uses to meet the long-term needs of the campus and population". Under the proposed UCP, the location of housing, stores, offices, businesses, cultural, and recreational facilities near the Campus and near each other will promote a sense of Community and interactive relationships between the Campus and the community it is a part of. Community uses will be located no more than 2 miles from the Campus, with approximately 45 percent of the housing located within 1 mile. This arrangement of land uses in relation to the Campus and to each other will promote opportunities for students, faculty, staff, and others to walk, bicycle, or use local shuttle systems from their homes to the Campus and to shopping, services, work, entertainment, and recreation. An active, vibrant college community is an important element of the college experience. The University Community proposed by the County is designed to provide an attractive, dynamic community that will be highly integrated with the Campus. Such a community will help to make the UC Merced Campus highly desirable, which will help the University to attract top-quality faculty and students. Locating Campus-induced populations at a distance from the UC Merced Campus, in Merced, Atwater, Livingston, or elsewhere in eastern Merced County would not be consistent with these overall goals.

In response to specific comments regarding whether growth of the City of Merced could meet the long-term needs created by the University in the absence of the University Community, such UC Merced-generated growth was not anticipated by the City of Merced's General Plan land use designations. The City of Merced General Plan establishes land use classifications to accommodate growth to the year 2015. Its urban form and land use capacities are based on

assumptions about growth independent of increases due to development of UC Merced and they do not extend to the long range time frame anticipated for full development of the University. As a consequence, if the need for growth associated with the Campus were to be met in the City of Merced rather than a University Community, this would, in theory, necessitate an increase in the City's planned development capacity to off-set the loss of capacity for other anticipated and planned (noncampus-related) growth. The City of Merced has formulated a conceptual plan to expand capacity to accommodate long-term growth (through 2040). The City has tentatively identified areas to the north and northeast of the existing SUDP as candidate locations for growth when the capacity of its existing lands designated for new development is exhausted. This proposal has not been adopted by the City, however.

As noted above, development demand generated by UC Merced in the early years will occur prior to the build-out of the City of Merced General Plan and it is expected that some of that development demand will be met by development of undeveloped lands in the City designated for development in the City's general plan.

4.22.D Miscellaneous Growth Issues

Comments I46-2, O31-56, O31-64, and O31-65 request that the EIR address the growth-inducing effects of roadways and other infrastructure extensions to the Campus and the University Community sites, as well as the physical effects of these extensions and growth induced by the project on biological resources. Comment O1-1 asks about growth in the area surrounding the Campus.

Section 6 in the Draft EIR discusses potential growth that could be induced by the project. Impacts on biological resources from this growth are discussed under Impact 4.4-11 in the Draft EIR. Section 6.3 in the Draft EIR (page 6-7) discusses the potential for growth inducement by the provision of infrastructure including utilities and new roadways, and explains the steps the County would implement to minimize the potential for induced growth. The University notes that it cannot guarantee that all of the measures would be implemented and, therefore, it is considered possible that the provision of infrastructure could trigger growth in the rural residential center areas along Lake and Bellevue roads. No potential for infrastructure-related induced growth exists elsewhere in the region. Impacts on sensitive biological resources from the construction of off-site improvements including utilities and roadways are discussed in the Draft EIR on pages 4.4-67 and 4.4-68.

Comment O1-1 expresses concern that the growth induced by the Campus could surround the Campus and involve the development of lands to the east and north of the Campus. As stated in the Draft EIR and in Section 4.4.A, the Campus Natural Reserve and 5,000 acres of VST lands adjacent to the Main Campus and the Campus Land Reserve would be protected from all development by placing these lands under conservation easements. Therefore, the University Community project would develop on lands only to the south of the Campus.

References

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