Chapter 7. Cumulative Impacts and Other CEQA-Required Analyses

INTRODUCTION

This chapter provides an assessment of cumulative impacts, growth-inducing impacts, irreversible environmental changes, and significant and unavoidable adverse impacts. The analysis is limited to the time frame of the Davis General Plan, the year 2010. Because the potential land uses in the City beyond that time are unknown, attempting to apply a longer time frame would be excessively speculative.

Requirements for Cumulative Impact Analysis

The State CEQA Guidelines (Section 15130) require a reasonable analysis of the significant cumulative impacts of a proposed project. Cumulative impacts refer to "two or more individual effects which, when considered together, are considerable or that compound or increase other environmental impacts" (Section 15355). Cumulative impacts must be discussed when the project would make a "cumulatively considerable" contribution to such an impact. As defined by the State CEQA Guidelines, cumulative impacts are:

> [t]he change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (Section 15355[b]).

The analysis of the proposed General Plan update contained in this EIR is inherently cumulative since impacts within the City's planning area, including past, present, and reasonably foreseeable projects within a 160-square-mile area, are assessed. This chapter also assesses regional cumulative impacts, which includes the plans of other local government jurisdictions in the surrounding region. Local cumulative impacts are assessed relative to City plans. As provided under State CEQA Guidelines (Section 15130), where the project's contribution is less than cumulatively considerable as a result of mitigation measures "designed to alleviate the cumulative impact", the project is not considered to make an important contribution to that cumulative effect. The relevant jurisdictional growth plans are summarized below.

Growth Plans of Surrounding Jurisdictions

Although other jurisdictions are sovereign, the land use and resource policies of other jurisdictions can affect the region's population, housing, economy, air quality, water supply and quality, drainage, mobility, open space, and long-term viability of agriculture.

Below is a brief summary of the general plans for the surrounding areas. Figure 3-1b shows the planning areas and spheres of influence of the jurisdictions surrounding the City.

The Yolo County Local Agency Formation Commission (LAFCO) adopts spheres of influence to assist in land use decisions on boundary changes of cities and special districts. Planning areas are adopted by the individual cities themselves and sometimes overlap these boundaries.

Yolo County General Plan

The Board of Supervisors adopted the most recent County General Plan on July 17, 1983. Although some policies have been changed since that time (land use policies specific to the Knight's Landing development were updated in 1990), there have been no comprehensive revisions of the plan since its adoption. The County's goals of agricultural preservation and contiguous urban development are generally consistent with Davis policies.

The County General Plan contains 42 goals. The goals that relate to Davis are as follows:

- Protect prime and other agricultural land from urban development.
- Create urban open spaces, greenbelts, and scenic highways.
- Discourage urban sprawl.
- Continue to improve existing urban uses and place new urban uses in existing planned urban areas.
- Conserve natural resources.

The plan contains significant policies related to vigorously conserving and preserving agricultural land; nonagricultural land uses are prohibited in agriculturally designated areas. An administrative policy states that "Yolo County shall require urban development to be placed within city limits in urban areas of Davis, Woodland and Winters". The plan also discusses preserving open spaces (such as streams, drainage channels, rivers, and habitat), creating an open space corridor plan, and establishing wildlife areas.

Yolo County's current population is 158,800 persons. At buildout projected to the year 2010, up to 239,068 people might be accommodated. This number is speculative in that the County can be expected to update its 16-year-old plan before 2010 and may change current assumptions and policies.

Yolo County Davis Area General Plan

In addition to the County General Plan's goals and policies, the Davis planning area is affected by the policies and land use map found in the County's Davis Area General Plan, which was adopted by the Board of Supervisors on August 3, 1976. Most of the land on the County land use map is designated for agriculture with some land being designated for residential and limited industrial land uses. Although some of the land uses proposed in this plan are in conflict with the existing Davis General Plan, the basic policy statement conforms with the Davis General Plan. The policy states that all urban development within the sphere of influence of the City should take place only after annexation.

Woodland General Plan

The City of Woodland lies approximately 7 miles north of Davis and had a population of 43,402 at time of Plan adoption. The Woodland General Plan was adopted by popular referendum in November 1996. The plan foresees the city population growing from 43,402 to 58,150 by 2010, eventually covering approximately 10.2 square miles. It also assumes an increase in employment from 15,400 to 26,500 in the same period. With concerns over development pressures, floodplains, preservation of prime agricultural land, preservation of town character, and efficient extension of infrastructure, the plan defines an urban limit line. This line encompasses all land to be considered for urban development within the timeframe of the General Plan (2020). The plan encourages in-fill development and reuse of underutilized lands within the urban limit line. It also envisions that a permanent urban limit line will protect agricultural land outside the City in perpetuity. The western and northern boundaries of the permanent urban limit line are indicated in the plan; the boundaries to the south and west will be determined after further study. Areas east of County Road 102 and south of Main Street are designated as urban reserve. The boundary of the LAFCO sphere of influence study for Woodland coincides with the planning area boundary.

Figures for allowable land uses under the City's general plan are summarized in Table 7-1.

West Sacramento General Plan

The City of West Sacramento is located approximately 9 miles east of Davis and had a population of 27,531 at time of Plan adoption. The West Sacramento City Council adopted its

General Plan in 1990. The boundary of the LAFCO sphere of influence study coincides with the City limits. The general plan area of interest extends west to the easterly city limits of Davis.

Table 7.1. General Land Uses under Each Plan

Plan Area	Residential	Open Space	Agriculture	Commercial	Industrial	Other
Yolo County[a]	N/A	N/A	N/A	N/A	N/A	N/A
Davis[b]	22,074[c]	1,009[d]	N/A	3,476,000[e]	800,000[f]	N/A
Woodland[g]	5,694	N/A	44,095	656	2,618	2,778
West Sacramento[h]	1,801	4,823[i]	2,935	483	860	1,406
Winters[j]	862	25	1,360	197	430	234[k]
Solano County[l]	45,000	119,500[m]	314,200	5,500	20,000	965[n]
Dixon[a]	N/A	N/A	N/A	N/A	N/A	N/A

[a]Land Use numbers are not available at the time of this publication.

[b]Source: City of Davis General Plan Update, 1999.

[c]Total number of dwelling units.

[d]Total acreage of vacant land.

[e]Total square feet of neighborhood retail, general commercial, and office/business park.

[f]Total square feet.

[g]Numbers shown reflect land uses within the Woodland Planning area. Source: City of Woodland General Plan, 1996.

[h]Source: J. Laurence Mintier & Associates, March 1988 from City of West Sacramento General Plan, 1990.

[i]Open Space acreage includes vacant, levees/canals/ship channel.

[j]Number shown reflect land uses within the Winters Planning area. Source: City of Winters General Plan, 1991.

[k]Other acreage includes planned mixed use, parks, public use.

[l]Numbers shown reflect land uses within the Solano County Planning area. Source: Solano County General Plan, 1995.

[m]Open space acreage includes watershed and multi-use marsh.

[n]Other acreage includes parks.

Note: UC Davis is not included in that it does not have a General Plan.

The West Sacramento General Plan assumes that the city would grow from 27,531 people in 1989 to 37,418 in 2010. The plan does not discuss phasing the growth, but it is acknowledged that before people can be located in the Southport area (the area south of the Deep Water Ship Channel), many major infrastructure improvements must be made.

Allowable land uses under the West Sacramento Plan are summarized in Table 7-1.

Winters General Plan

The City of Winters is approximately 14 miles west of Davis and had a population of 4,639 at time of Plan adoption. The Winters General Plan, which was adopted in 1992, assumes a 3% growth rate, from a population of 4,639 people in 1992 to 14,000 by 2010. The plan does not include a phasing plan except to say that services must be available. It includes an urban limit line concept showing where the urban uses are expected for the next 20 years. The urban limit line assumes that the city will contain 1,980 acres (1,277 are already in the city) and that it is bounded by I-505 on the east, Putah Creek on the south, County Road 88 on the west, and County Road 32-A on the north. The plan also includes a study area northwest of the urban limit line, where additional land may be allowed within the city in the future.

Table 7-1 summarizes the acreages of various land uses allowed under the Winters General Plan.

Solano County General Plan

The Solano County General Plan was adopted by the Solano Board of Supervisors in 1980. Generally, the Solano County General Plan conforms with the Davis General Plan policies. Solano County's General Plan contains policies regarding preserving agricultural land and encouraging urban development in existing communities.

Solano County's Proposition A, adopted by the voters in the mid-1980s, stated that no urban development can occur outside city spheres of influence. The principles contained in Proposition A were renewed by Solano County's voters in 1995 with the passage of a measure called the Orderly Growth Initiative. The initiative works similarly to Proposition A and is valid through 2010.

Most of the land in Solano County in the City's planning area is designated for intensive agriculture except for the land at the Pedrick Road interchange, which is designated for highway commercial. Putah Creek is designated in the Park and Recreation Element as a recreation resource area.

Solano County had a population of 224,894 at the time its general plan was adopted. The County general plan, as amended in 1995, projected a population of 333,593 in the year 2010.

See Table 7-1 for estimated acreages of allowable land uses under the Solano County plan.

Dixon General Plan

The City of Dixon is located approximately 8 miles southwest of Davis along the I-80 corridor. In January 1999, the City of Dixon had a population of 15,100. The Dixon City Council updated its General Plan in 1993. The 1993 plan projects a population of approximately 17,900 by 2010 and contains a policy that encourages the preservation of open space between Davis and Dixon to maintain community integrity and urban form. Designed to better balance the city's land use, the Dixon General Plan shows a considerable increase in the amount of land being designated for planned business/industrial, highway commercial, and residential. The Dixon sphere of influence northern boundary, closest to Davis, is south of Tremont Road.

Acreages for land uses are not available for Dixon.

University of California at Davis Long Range Development Plan

UC Davis is contiguous with the southwestern edge of the City. Nearly as old as the City itself, the university has evolved from the "university farm" in the first half of this century to a full-program academic institution offering more than 100 undergraduate majors and 80 graduate programs with notable achievements in the arts, biotechnology, environmental science, and engineering, as well as in the agricultural sciences. In addition, UC Davis has a law school, school of medicine, and school of veterinary medicine.

UC Davis is a major employer and generator of housing need in the Davis area. The campus has an enrollment of more than 22,000 students (1996), including undergraduate, graduate, and professional schools. This total does not include students off-campus at the UC Medical Center in Sacramento. UC Davis employed 9,944 persons (excluding student workers) in 1995-1996. Approximately 66% of UC Davis students live off-campus in Davis, occupying almost one-third of all housing units in the City. Approximately 50% of UC Davis employees live in Davis.

The UC Regents adopted the UC Davis Long Range Development Plan (LRDP) for UC Davis in 1994 with a planning horizon of 2005-2006. This plan guides physical development on the campus to achieve academic needs and goals. Six complementary planning principles have been applied in the development of the LRDP: the creation of positive environments for academic and social interaction; development of the entire campus as an educational resource; concentration of new development within existing developed areas of the campus; maintenance of the open character of the campus; augmentation of the LRDP with guidelines for campus neighborhoods or districts; and building upon the historic pattern of campus development. The plan contains elements addressing land use, open space, and pedestrian, bicycle, and motorized vehicle circulation on campus.

Approximately 1.75 million square feet of new space will be required on campus to meet projected academic, administrative, and support needs. Additional facilities will include playing fields and recreational facilities. Under the plan, the optimal enrollment on campus at the end of 2006 will be 26,000. New on-campus housing will be needed to meet the university's target of housing 25% of its students on campus.

At current occupancy rates, growth at UC Davis will create a need for more than 1,700 additional housing units in the City by 2006. During this same time frame, university growth will add approximately 3,400 employees, 1,700 of whom may live in Davis if current residency rates are sustained (the residency rate for employees has been declining in recent years).

Sacramento Area Council of Governments Regional Projections

The Sacramento Area Council of Governments (SACOG) is an association of 20 city and county governments in the greater Sacramento Metropolitan Area. It covers a region of more than 1.5 million people and 3,343 square miles and provides planning support and data technical tools for the region. The City of Davis is a member government of SACOG.

SACOG covers six counties and is divided into approximately 70 Regional Analysis Districts (RAD). A RAD is an area defined by SACOG that may have the same name as a community planning area or a city, but which generally covers a larger area. Davis is located within the Davis RAD, which stretches from the West Sacramento city limit to approximately midway between Davis and Winters, and north to approximately midway between Davis and Woodland.

SACOG projects the total population in the Davis RAD to increase from 61,191 people in 1997 to 75,089 by 2010, an increase of approximately 18.5% over the 13-year period (or an average of approximately 1.4% annually). Similarly, the total housing in the Davis RAD is expected to increase from 23,251 units (12,197 single-family units, 10,479 multifamily units, and 575 mobile homes) in 1997 to 28,687 units (15,639 single-family units, 12,459 multifamily units, and 589 mobile homes) in 2010, which represents an increase of approximately 18.9% over the 13-year period (or an average of approximately 1.5% annually). The estimated increase is based on the existing Davis General Plan, with additional development projected for the areas outside the city.

Table 7-2 summarizes the population projections for surrounding communities.

Table 7-2. Population Projections

Plan Area	Existing Population	2010 Projection
Yolo County[a]	156,800	221,256
Davis	56,018	65,429
		65,600
Woodland[b]	43,402	58,150
West Sacramento[c]	7,531	37,418
Winters[d]	4,639	14,000
Solano County	224,894[e]	333,593[f]
Dixon[g]	15,110	17,900
UC Davis Long Range Development	22,000[h]	26,000[i]

Note: Existing Population reflects population estimate at time of adoption of the respective plan.

[a] Linda Nantz, Yolo County. Personal Communication 01/05/00.

[b] Source: City of Woodland General Plan, 1996.

[c] Source: City of West Sacramento General Plan Final Draft Background Report, 1990.

[d] Source: City of Dixon General Plan Background Report, 1991.

[e] Source: Solano County General Plan Land Use and Circulation Element, estimate at time of plan adoption in 1980.

[f] Source: Solano County General Plan Land Use and Circulation element, estimate at time of plan amendment adoption in 1995.

[g] Mirella Almaraz, City of Dixon. Personal Communication 12/30/99.

[h] Estimate is based on 1996 total enrollment.

[i] Estimate is based on optimal total enrollment through development planning horizon of 2005-2006 from UC Davis Long Range Development Plan. 2010 statistic is not projected at this time.

ASSESSMENT OF CUMULATIVE IMPACTS

Cumulative General Plan-related impacts were analyzed for the same resource topics analyzed in Chapter 5 of this EIR. The analysis is based on projections contained in adopted general plans and the levels of contribution made by the four plan alternatives. Where no cumulative impacts exist, the discussion so notes. The cumulative impacts for each of these resource topics are described below

Land Use and Aesthetics

Land Use

The City and surrounding communities have developed planning documents to guide future development in their respective communities. Each of these plans provides a framework to attempt to manage growth and to plan responsibly for the future of the community. Each of the cities and counties in the region holds similar development policies to encourage urban development in designated urban areas, preserve open space, protect valuable resources, and discourage sprawl. Alternatives 2, 3, and 4 project a smaller population, on essentially the same basic footprint, as the current Davis General Plan. Alternative 5 projects a slightly larger population, with new development making a significant eastward extension of the City. Alternatives 2, 3, and 4 would not incrementally contribute to any inconsistencies with adopted environmental plans or to any cumulative land use conflicts. Their impacts would be ***less than significant***. Alternative 5 would make a considerable contribution to urban sprawl by extending the City of Davis nearly 1.5 miles further east, thereby resulting in a ***significant*** effect. Project–related conflicts under Alternative 5 could be mitigated, but not avoided, through implementation of mitigation measure LU-2.1.

Agriculture

Under all four alternatives (except Alternative 3, variations 1 and 2), the proposed project would contribute to cumulative impacts on agricultural resources during the planning period. These impacts are expected as a result of planned conversions of agricultural land to other uses. The Davis region has been historically occupied by extensive agricultural and rural lands. Increased urban growth in areas where underlying soils are of high agricultural quality result in the conversion of agricultural properties. Under Alternatives 2, 3, and 4, minimal land use conversions from agricultural to urban uses would occur in Davis. Alternative 5 would have a more substantial impact because it would convert lands outside the City's current growth boundary. Overall, the project's incremental contribution to the loss of the region's agricultural lands is considered ***significant and unavoidable*** since any level of conversion is considered an irretrievable commitment of limited agricultural resources.

Many of the surrounding communities are attempting to implement growth strategies to manage agricultural conversion and urban growth pressures. Solano and Yolo Counties and other local communities have developed policies to preserve agricultural lands where possible and to limit development to designated urban areas. Nevertheless, the Davis community considers conversion of any agricultural lands to have substantial implications for environmental resources, as well as the socioeconomic status of a community and its residents.

Aesthetics

Many of the surrounding communities are attempting to implement growth strategies to manage growth responsibly and to preserve the character of the areas. One way of implementing these policies is to provide urban growth boundaries, greenbelts, agricultural preserves, open space areas, and transition areas. The dilemma results from attempting to balance projected growth with the duties and requirements to accommodate growth. The efforts to minimize sprawl and unplanned growth are attempts to mitigate community impacts, including potential impacts on aesthetic resources.

From a regional perspective, as one travels from one city or region to another in the Sacramento region, and particularly along the I-80 corridor, the landscape changes from a more rural character to a more urbanized character. All four alternatives would result in unavoidable changes in localized views because new development will occur. However, the incremental contributions of Alternatives 2, 3, and 4 to changes in regional views are considered ***less than significant*** since views from major public viewing places (e.g., I-80 and SR 113) would not be substantially altered. Development of the Nishi site under Alternatives 2, 4, and 5 is judged to have a ***less-than-significant*** impact because it is viewed from I-80 against the backdrop of UC Davis development. Alternative 5 would make a cumulatively considerable contribution to changes in aesthetics occurring along the I-80 corridor. Development of the open view between Davis and the Yolo Bypass would increase the urbanized "feel" of driving between Sacramento and the Bay Area. Alternative 5 would have a ***significant and unavoidable*** regional impact.

Population and Housing

As discussed in Chapter 5B, "Population and Housing", population and housing impacts related to implementation of the General Plan were determined to be ***less than significant.*** The City and surrounding communities are planning to accommodate projected growth. Population estimates under all four alternatives are consistent with SACOG planning projections and vary only slightly from projected population under the existing Davis General Plan. Therefore, cumulative population impacts are considered ***less than significant***.

Under Alternatives 4 and 5 of the General Plan update, the focus of development is toward employment-generating uses. So, although population within the city would remain within planned limits, these alternatives would increase the number of jobs over those planned in the current Davis General Plan. A possible cumulative impact of this job growth is the potential shortage of adequate housing within the community to serve the increasing employment base. Although the mobile workforce confounds attempts at achieving a true jobs/housing balance, the provision of numerous additional jobs in a City with limited new housing sources will almost certainly lead to additional commuters.

This shortage may increase growth pressures in other areas, such as Winters, Dixon, and Woodland, or increase the number of commuters from the Sacramento metropolitan area, with

associated traffic increases, sprawl, and environmental impacts on resources such as aesthetics, agriculture, air quality, and noise. Alternative 3, with only limited development allowed, may have a similar impact by reducing the supply of planned housing (particularly in light of projected increases in UC Davis students and staff members), redirecting future employees to reside in nearby cities, such as Woodland, Dixon, and Sacramento.

Public Services and Utilities

The proposed project, in the form of the four alternatives, will impact most public services and utilities to some extent. Public services and utilities can be organized into regional and local categories. In some cases, the particular service or utility has no cumulative impact to which the project would contribute. In other cases, all or some of the alternatives would make a cumulatively considerable contribution to a cumulative impact.

Solid waste, gas/electricity, and drainage are regional issues that do not suffer from a cumulative impact. The Yolo County landfill has sufficient capacity to accommodate the waste stream from its service area, including the City of Davis, during the planning period. Similarly, no limitations on gas or electricity supplies are forecasted to occur as a result of development within Davis and the surrounding communities during the planning period. Drainage capacities within Davis and the surrounding cities are adequate to contain expected run off.

Police protection is a local issue that is not cumulatively impacted. The City's officer to population ratio is below the City standard, but is slated for increase. The City will be able to provide adequate protection under any of the alternatives. Davis' water supply is also a local issue and is not cumulatively impacted. Davis' water supply and wastewater treatment capacity are projected to meet demands during the planning period and will not be substantially depleted by this incremental use. Park and recreation facilities are local services that can be impacted by development when there are insufficient facilities to serve the community and new development places additional burdens on the system. However, Davis has maintained an adequate supply of facilities for its existing residents. Further, the City's General Plan update policies will ensure that needs will continue to be satisfied. As a result, development has no cumulative impact on parks and recreation.

Fire protection, schools, the library system, and water supply and wastewater conveyance facilities are local services and utilities that are either cumulatively impacted at the present time, or would be impacted by one or more of the General Plan update alternatives. In most cases, one or more of the alternatives would make a considerable contribution to these impacts.

The City currently lacks fire protection infrastructure to provide full coverage and meet the response time established in the General Plan update. As a result, any increase in development above current levels would make a cumulatively considerable contribution to this impact. As a result, all four alternatives would contribute to this impact and result in a ***significant*** effect.

City schools have adequate capacity to serve the community. However, 1998 changes in state law relative to financing new school construction (SB 50/Proposition 1A) may hinder the DJUSD's ability to provide classroom facilities to meet new demand. The City has specified that any demand that cannot be mitigated by plan policies would result in a significant effect. If SB 50/Proposition 1A limitations prevent the mitigation measures from reaching full effectiveness, then there would be an impact. In that situation, any of the alternatives could make a cumulatively considerable contribution to this impact and result in a ***significant*** effect. This is a prospective, rather than certain impact, since it is dependent upon uncertainties in the implementation of SB 50/Proposition 1A, but it is presented here to provide full disclosure.

The Davis library system is currently operating at capacity. Any of the four alternatives would necessitate book acquisition, facility construction, and additional employees in order to meet the service standards established under the General Plan update policies. However, implementation of mitigation measure PS-5.1 will provide the necessary expansions no matter which alternative is chosen. As a result, development under any of the alternatives would not make a considerable contribution to the impact and the impact would be ***less than significant***.

Davis has sufficient water supply to serve development under any of the alternatives. However, its water supply facilities primarily serve the existing developed area and the City has determined that substantial expansion of water supply distribution facilities would be a significant effect. Alternatives 4 and 5 would require the extension of existing facilities in order to supply service. These would contribute considerably to the cumulative effect of extending service and would result in a ***significant*** effect.

The City has sufficient wastewater treatment facilities to serve projected levels of development under any of the alternatives. However, it does not have existing conveyance facilities to serve Alternatives 4 and 5. The City has determined that substantial extensions of sewer lines are a significant effect. As a result, these two alternatives would make a considerable contribution to the cumulative impact of extending sewer service and would result in a ***significant*** effect.

Traffic and Circulation

Traffic is both local and regional and is directly associated with population and development growth. Increased development of commercial, industrial, and residential uses would result in increased traffic. Traffic modeling conducted for the proposed project was estimated using regional inputs that included cumulative conditions (See Chapter 5D, "Traffic and Circulation"). This assessment concluded that the proposed project would result in ***significant and unavoidable*** roadway system impacts. Since this assessment is inherently cumulative, the project's incremental contribution to cumulative roadway system impacts is considered to be ***significant and unavoidable***.

Air Quality

Air quality is a regional resource affected substantially by urban growth. The major contributor to air quality impacts is automobile use. Increased urban growth necessarily leads to the increase in automobile use. Additionally, growth in industrial uses could affect air quality from emission sources at manufacturing operations.

Construction activities also could contribute to cumulative air quality impacts. Each of the communities in the region is projecting growth. Increases in development result in increased construction activities. These air quality effects are generated from fugitive dust from excavation, grading, and earth preparation, as well as construction equipment and worker commuting. Regionally, these impacts could be significant without appropriate mitigation.

The air quality analysis contained in Chapter 5E, "Air Quality" is based on a large part to the traffic analysis and therefore inherently cumulative. The analysis concludes that ***significant and unavoidable*** construction-related and local CO emissions would occur. Therefore, the project's incremental contribution to cumulative air quality impacts is considered ***significant and unavoidable***.

Noise

Noise is a local issue. Implementing the proposed project would not make a significant contribution to cumulative noise impacts (See section 5F, "Noise"). The primary source of noise that would be of concern would be traffic-related noise. Development in the area could lead to increased traffic and automobile use on regional highways and local thoroughfares. However, noise impacts are considered ***less than significant*** because the General Plan provides policies that require new development to comply with the interior and exterior noise levels described in Figure 5F-1. Therefore, the project's incremental contribution to cumulative noise impacts is considered ***less than significant.***

Hydrology and Water Quality

Hydrology and water quality are local issues. Implementing the proposed project would not result in a considerable contribution to cumulative impacts on hydrology and water quality, since the proposed General Plan includes policies to mitigate impacts and because regulations are in place to mitigate impacts. Therefore the project's incremental contribution to cumulative hydrology and water quality impacts is considered ***less than significant***.

Biological Resources

Biological resources are looked at from a regional perspective. Implementing the proposed project would not make a considerable contribution to cumulative impacts on biological resources. Regional growth in the area would likely result in the development of lands that were previously unoccupied or existed in a natural condition. Development of these types of areas could result in significant impacts on biological resources. Many biological species are migratory and depend on expansive areas of habitat. Conversion of these areas could result in substantial effects among plant and animal populations. Additionally, potential indirect impacts could occur as a result of increased urban activity, such as water quality effects, noise, and traffic-related mortality effects.

Each of the communities, as well as the counties, has developed policies to preserve natural open space areas and direct new urban growth in urban areas. The provision of greenbelt areas and preservation areas is an attempt to mitigate for the potential impacts on biological resources. With these policy protections and implementation of the mitigation measures identified in Chapter 5H of this EIR, the City's contribution to this impact is less than considerable and the effect is ***less than significant***.

Soils and Geology

Soils and geology are local issues (loss of agricultural land is regional and covered elsewhere). Implementing the proposed project is not anticipated to result in significant seismic-related cumulative impacts. The regional area is not seismically active, and no faults are located in the near vicinity. The nearest faults are located in northwestern Yolo County (in Jericho Valley) and near Napa County (in Knoxville). These faults are not likely to result in substantial adverse seismic effects in the project region. So there is no cumulative impact relative to seismicity. Some soils in the Davis area are less than optimal for development. Unregulated construction would create a cumulative impact relative to building damage. The project is not expected to contribute to cumulative soil impacts since the proposed General Plan and standard construction practices would mitigate the project's incremental contribution to ***less than significant.***

Cultural Resources

Cultural resources are local, but depending on their significance, can have a regional importance. Project impacts on cultural resources are discussed in Section 5J, "Cultural Resources". The General Plan and the City's historic resource regulations ensure that there will be no significant impacts on known cultural resources. Based on the setting of the area, there exists the potential for unknown cultural resource sites to be discovered in the planning area. The

loss of important resources can be cumulative because it occurs incrementally. However, with the application of the mitigation measures provided in the EIR and standard discovery conditions included in project approvals, the contribution to cumulative impacts on cultural resources occurring as a result of the General Plan update is expected to be ***less than significant***.

GROWTH INDUCEMENT

According to Section 15126.2(d) of the State CEQA Guidelines, an EIR must address whether a project will directly or indirectly foster growth. Section 15126(d) reads as follows:

> [An EIR shall] discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of wastewater treatment plant, might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

As discussed in this section, this analysis evaluates whether the proposed General Plan update will directly or indirectly induce economic, population, or housing growth in the surrounding environment.

Impact of Proposed Project

Development proposed under Alternatives 2, 4, and 5 of the General Plan would foster economic growth in Davis and the surrounding area as new employers create a demand for additional housing and increased demand for goods and services. The provision of new housing under any of Alternatives 2, 4, and 5 also would directly result in population growth in the City.

The proposed General Plan update would increase demand for existing community facilities. The fiscal impacts of the proposal are addressed in the fiscal study for the General Plan update being prepared by Bay Area Economics.

Alternatives 4 and 5 of the General Plan update may encourage development on sites that are located beyond the existing Davis urban edge. Both of these alternatives would need water and sewer extensions. Such extensions may remove obstacles to additional growth by serving

new areas or, in the case of Alternative 5, areas that are well beyond the current urban edge. In addition, Alternatives 4 and 5 would significantly increase the City's job base. Despite Davis' growth management policies, increases in jobs in the community coupled with increased housing costs fed by insufficient supply may stimulate housing growth elsewhere in the region. While there are economic benefits to increasing the number of jobs, this also increases market pressures for residential development. This may be manifested in proposals to amend the Davis general plan in the future, or more directly, increase housing demand in surrounding communities such as Dixon and Woodland. This is a ***significant*** growth-inducing impact.

The relative growth-inducing impacts of the four alternatives are summarized in Table 7-3. The number of "yes" boxes across from each alternative offers a general idea of the relative level of growth-inducing impact generated under Alternatives 2, 4, and 5. Keep in mind that this does not reflect the regional growth-inducing impacts that may result from reduced housing supply under Alternative 3.

Table 7-3. Relative Level of Growth-Inducing Impact by Land Use Map Alternative

Sites Being Studied	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Nishi/Gateway	N	N	N	N
Covell Center property	N	N/N/Y[a]	Y[b]	Y
Signature site	n/a	n/a	Y	Y
Mace Ranch	N	N	N	N
Under Second Street	N	N	N	N
Sutter-Davis Hospital	n/a	n/a	N	N
Oeste Campus	n/a	n/a	Y	n/a
Davis Technology Center	n/a	n/a	n/a	Y
Intervening Lands	n/a	n/a	n/a	Y
Overall potential for growth-inducement	N	N	Y	Y

[a] Represents Variations 1, 2, and 3, respectively.

[b] The number of "yes" responses associated with each alternative offers a general idea of the relative level of growth-inducing impact generated under each alternative. Keep in mind that low-growth alternatives may have overall growth-inducing impacts in the region while having limited growth-inducing impacts on Davis itself.

Sites Being Studied

The General Plan presents several land use map alternatives that represent a full range of reasonable land use possibilities. In addition to planned Citywide in-fill development that is anticipated in the plan, several major project sites have been identified that are evaluated in an equal level of detail. The potential growth-inducing effects of each of these projects are discussed below.

Nishi/Gateway

Implementing the Nishi/Gateway project is unlikely to result in significant growth-inducing impacts. Because of the scale of the project (44 acres and 390,000 square feet of office/institutes and research and development uses), it is not expected to induce substantial growth. It is likely that employment could be served by the existing regional labor market. No new housing would be required for employees to serve the project. This project would proceed at reduced intensity under Alternative 2, would be placed in Urban Reserve under Alternative 3, and would be built out to the provisions of the approved specific plan (as described above) under Alternatives 4 and 5.

The site is surrounded by existing nonresidential uses and hemmed in by the I-80 freeway to the south; thus, the project would not be expected to result in the encouragement of other development proposals in the area. Additionally, this project is part of an existing specific plan that has already been approved by the City. No ***significant*** impacts are anticipated.

Covell Center

Implementing most of the variations being considered for the Covell Center project could potentially result in growth-inducing impacts. This project is in the existing General Plan; however, no project has yet been approved. The Covell Center site is a 386-acre property surrounded by commercial services, industry (e.g., Hunt-Wesson plant), agriculture, and single-family and multifamily residential uses. The site has several proposed uses that vary under each alternative. These alternatives range from an office park with urban reserve (Alternative 3, variation 3), development of a business park, housing units and commercial services (Alternatives 4 and 5), or an extensive mixed-use development (Alternative 2). Under all alternatives, with the exception of the preservation alternative (Alternative 3, variations 1 and 2), this project may result in a ***significant*** growth-inducing impact.

With the development of residential units, this project would result in direct growth of up to 1,247 units. Commercial and industrial uses would encourage direct and secondary economic growth. Only Alternative 3, variations 1 and 2 would not remove identified obstacles to population growth. Most alternatives would increase demand for existing community facilities. The fiscal impacts of the proposal are addressed in the fiscal study for the General Plan update being prepared by Bay Area Economics.

In addition, most of the variations of this project could encourage other development proposals on sites that are located on land beyond the existing urban edge. The exception would be the preservation alternative.

Signature Site

As shown on Figure 3-6, the DJUSD is proposing to use half of the 90-acre Signature site for a new junior high school. The remainder of the site would be designated by the City as urban reserve. Development of the junior high school on this site is expected to put additional pressure on the urban reserve lands for early urban development. By increasing traffic in the area and indirectly restricting agricultural practices (pesticide and herbicide spraying is limited near schools; cultivating raises dust that can cause complaints from school administrators, teachers, and parents), continued agricultural use of adjoining property may become unattractive. In particular, the urban reserve portion of the signature site has a high potential for residential development due to the sites location near the existing Mace Ranch development, and the potential restrictions on agricultural practices that were described above. Accordingly, this is considered to be a ***significant*** growth-inducing impact.

Development of a portion of the Signature site for a junior high school is required to accommodate the demands identified in existing buildout projections and plans. Developing the school itself is not considered to be growth inducing. The overall development at the Mace Ranch is seen as the major growth inducing development in the area, and while the development of the Signature site will incrementally add to this growth inducement, this project is not seen as causing a significant change in the existing environment.

This project is found in Alternatives 4 and 5. The land would remain in agriculture and therefore have no growth-inducing impacts under Alternatives 2 and 3.

Mace Ranch

Developing the Mace Ranch interior retail site would not result in growth-inducing impacts. This small (8-acre) retail site was approved as part of the Mace Ranch mixed-use project. It is intended to serve the existing population in the immediate area. It is found in all four alternatives.

Under Second Street

Developing the under Second Street site would not result in growth-inducing impacts. This project is an 11-acre site surrounded by existing development. It is adjacent to I-80 and provides close access to the freeway. The proposal for the site under Alternatives 2 and 3 is for office/light industrial use. Under Alternatives 4 and 5, the proposal consists of a hotel, restaurant, and community and commercial services. This project would likely serve visitors and existing community members.

As an in-fill project, it would not require extension of services, encourage new growth on the urban edge, nor encourage substantial economic growth in the surrounding area.

Sutter-Davis Hospital

Developing the Sutter-Davis Hospital site would not likely result in growth-inducing effects. This 20-acre property is proposed for the extension of an existing hospital and supporting institutional and office uses under Alternatives 4 and 5. It is designated as Urban Reserve under Alternatives 2 and 3. Although implementing this project may result in additional employment opportunities, because of the use and scale of the project, it is not expected to induce substantial growth that would be considered significant.

Davis Technology Campus

Developing the Davis Technology Campus site is considered growth inducing for the following reasons:

- The scale of this proposal is likely to foster secondary economic growth in Davis as significant new employers create increased demand for goods and services in Davis and surrounding communities.

- Some new population growth is likely, and it appears that insufficient housing stock would be available to accommodate the additional demand associated with this proposal (refer to the "Population and Housing," section, above).

- Implementing the project would remove any obstacle to additional population growth east of Davis by necessitating the annexation of additional land located between the existing City limits (at the east side of the California Department of Forestry and Fire Protection facility) and the Davis Technology Campus south of East Chiles Road to the vicinity of the east end of Covell Boulevard. The area that is likely to be an unintended part of any annexation proposal by the project proponent totals approximately 200 acres. The 200-acre area is planned for agriculture by both the County and City, but annexation would require the City and LAFCO to reexamine the ultimate use of this land.

- Another obstacle to additional population growth would be removed by installation of a second sewer line to provide increased capacity to serve the second phase of the Davis Technology Campus development approximately 8-15 years in the future. This new sewer line extension would parallel the existing line from El Macero north along County Road 105 to the City Wastewater Treatment Plant near Willow Slough. This new line would be sized to provide "replacement capacity" for capacity used by the first phase of the project that would use available capacity provided by the existing sewer line. Capacity would then be made available to potentially serve additional development that may be proposed for the area east of Mace Boulevard and north of I-80.

- Implementing this proposed project would increase demand for existing community facilities, but community services appear to be generally adequate to address this demand. The fiscal impacts of the proposal are addressed in the fiscal study for the General Plan update being prepared by Bay Area Economics.

- This project could encourage other development proposals on sites that are located on land beyond the existing urban edge. However, the Davis Technology Campus would provide a strong and permanent urban growth boundary at the eastern edge of Davis, which may contribute to long-term (i.e., beyond the term of this General Plan update) growth management objectives.

This project is found only in Alternative 5. The site is designated for agricultural use in Alternatives 2, 3, and 4.

Intervening Lands

Implementing this project could result in potential growth-inducing impacts. This project involves the direct provision of new housing (560 housing units) adjacent to the Davis Technology Campus. It would increase demand for existing community facilities, especially in south Davis. The fiscal impacts of the proposal are addressed in the fiscal study for the General Plan update being prepared by Bay Area Economics.

This project is found only in Alternative 5. The site is designated for agricultural use in Alternatives 2, 3, and 4.

Oeste Campus

The Oeste Campus proposal is considered growth inducing for the following reasons:

- The scale of this proposal (up to 1.4 million square feet of office/business park space, and 109,000 square feet of commercial uses) is likely to foster secondary economic growth in Davis because it will bring a significant number of new jobs. The resultant employees will create increased demand for goods and services. Some new population growth is likely, and it appears that insufficient housing stock would be available to accommodate the additional demand associated with this proposal (refer to the "Population and Housing" section, above).

- This proposal would increase demand for existing community facilities, but community services appear to be generally adequate to address this demand. The fiscal impacts of the proposal are addressed in the fiscal study for the General Plan update being prepared by Bay Area Economics.

- This proposal could encourage other development proposals on sites that are located on land beyond the existing urban edge, particularly those to the north and west of the site. However, if a conservation easement or other permanent protection is provided on lands proposed for permanent agricultural use, the Oeste Campus proposal would provide a strong and permanent urban growth boundary at the eastern edge of Davis west on County Road 99, which may contribute to long-term growth management objectives.

- Similar to the Davis Technology Campus proposal, installation of additional or upgraded utility infrastructure (e.g., water and wastewater) would then be available to serve additional development proposed for the surrounding area.

This project is found only in Alternative 4. The site is designated for agricultural use in Alternatives 2, 3, and 5.

IRREVERSIBLE ENVIRONMENTAL CHANGES

Section 15126.2(c) of the State CEQA Guidelines requires an EIR to include a discussion of significant irreversible environmental changes that would result from implementation of a project. Implementation of the proposed General Plan update would result in the commitment of nonrenewable natural resources used in construction (such as gravel, petroleum products, and others) and slowly renewable resources (such as wood products for individual project construction). Development and operation of specific projects in the planning area also would result in a commitment of energy resources in the form of fossil fuels, including fuel oil, natural gas and gasoline for automobiles, and facility utility services. For the City, an increased commitment of social services and public maintenance services also would result from implementation of the General Plan update. Additionally, the project will convert prime farmland to urban use.

SIGNIFICANT AND UNAVOIDABLE ENVIRONMENT IMPACTS

In accordance with the State CEQA Guidelines (Sections 15126, 15064, 15382), an EIR must examine in detail all impacts that are potentially significant and must examine significance of the impacts in light of mitigation measures that can reduce the impact.

Before application of mitigation, the proposed General Plan update was found to have a number of potentially significant or significant impacts. A summary of the environmental impacts associated with the proposed General Plan update and proposed mitigation monitoring measures are presented in Tables 2-1 and 2-2. These tables reflect the premitigation CEQA

conclusions of significance, recommended mitigation measures, and postmitigation CEQA significance conclusions for each impact.

With application of the mitigation measures proposed in Chapters 5, "Environmental Analysis", all General Plan update impacts are reduced to a ***less-than-significant*** level with the exception of the following impacts:

- **Impact LU-1: Consistency with General Plan Policies.** Consistency with the policies stated in the existing General Plan (Alternative 2) and the General Plan update (Alternatives 3 through 5) were evaluated. Alternatives 2 and 3 were found to be consistent. While Alternatives 4 and 5 were found to be consistent with policies designed to encourage business expansion, overall, the alternatives were found to be inconsistent with policies designed to strengthen the City's in-fill area, promote a compact city, and avoid sprawl.

- **Impact LU-3: Conversion of Agricultural Land to Urban Use**. The majority of the Davis planning area has soils that support classification as prime agricultural land. While in-fill sites and the two smaller sites being studied (Mace Ranch interior retail, Under Second Street) were not found to cause a significant effect, development of the other sites being studied under each alternative were found to be a ***significant and unavoidable*** impact. Alternative 5 would result in the greatest conversion of agricultural lands (up to 938 acres), followed by Alternative 4 (680 acres). Alternatives 2 and 3 (Covell Center Property – Business Park variation) also would result in the conversion of agricultural lands, although the amount would be lower (449 and 79 acres, respectively).

- **Impact LU-4: Change in Views**. In assessing impacts on views, the quality of existing views of a site and the potential for development to block an existing panoramic view were considered. Each land use map alternative was found to have some impact due to potential development on sites being studied. Development of the Signature, Mace Ranch interior retail, Under Second Street, Sutter-Davis Hospital, and in-fill sites were not found to be significant impacts due to their existing urban setting and lack of panoramic views through these sites. The development of the Nishi/Gateway site was found to be significant, but was reduced to less than significant with application of mitigations. Further, the site has existing urban uses as a backdrop from I-80. Potential development of Alternatives 4 and 5, the Oeste Campus site, Davis Technology Campus, and Intervening Lands were found to have a ***significant and unavoidable*** impact. Alternative 5, in particular, would significantly alter views from I-80 and contribute to the urbanization of the freeway corridor.

- **Impact PS-3B: Adequacy of Fire Protection Infrastructure.** This impact was designed to assess each of the land use alternatives for its effect upon need for fire protection infrastructure. All were found to have a ***significant and unavoidable*** impact upon the need for additional fire protection infrastructure due to their planned

development outside the City's 5-minute response area and the ongoing need for another fire station in the City.

- **Impact PS-7B: Impacts on Water Supply Distribution Facilities.** This impact was designed to assess each land use alternative for its effect expansion of water supply distribution facilities. Under Alternative 4 and 5, the Oeste Campus, Davis Technology Campus and Intervening Lands sites were found to have a ***significant and unavoidable*** impact upon the need for expansion of water supply distribution facilities due to the outlying locations and proposed development size of the study sites.

- **Impact PS-8: Impacts on Sewer Mains and Capacity, and Expansion of Treatment Facilities.** Each land use alternative was assessed for its impact upon extension of wastewater infrastructure and capacity. Alternatives 4 and 5 were found to have a ***significant and unavoidable*** impact upon the extension of wastewater infrastructure and capacity due to the relative development sizes and locations of the Oeste Campus site, Davis Technology Campus site and the Intervening Lands site.

- **Impact TC-2. Impacts on Roadway System.** This impact was designed to evaluate how each land use map alternative would impact the City of Davis' roadway system. Each land use alternative was found to cause a ***significant and unavoidable*** impact by increasing traffic volumes due to the projected land use growth.

- **Impact AQ-2. Increase in PM10, ROG, and NO_x, Emissions During Construction and Operation Phases**. This impact was designed to address the construction- and operation-related PM10, ROG, and NO_x emissions associated with each land use map alternative. Each alternative was found to have a significant and unavoidable impact due to the combined construction and operation emissions that clearly exceed the significance thresholds established by the YSAQMD. Adoption of mitigation measure AQ-2.1, which calls for the amendment of General Plan update policy AIR 1.1 to incorporate by reference specific pollutant control measures recommended by the YSAQMD, reduce air pollutant emissions, but the impact would remain ***significant and unavoidable***.

- **Impact AQ-3. Increase in Local CO Emissions Resulting from Project-related Traffic Increases**. Similar to Impact AQ-2, this impact was designed to address operation-related CO emissions associated with each land use map alternative. Traffic generated under each alternative was shown to cause an exceedance of state CO standards at the intersection of Richards Boulevard and First Street. Overall, each alternative was found to have a ***significant and unavoidable*** impact related to local CO emissions.

- **Impact NOI-3. Exposure of Noise-Sensitive Land Uses to Operations-Related Noise.** This impact was designed to assess the impact on sensitive receptors when

exposed to noise generated by operations from the various developments proposed under each land use map alternative. Alternatives 2 through 4 were found to have a ***less-than-significant*** impact due to the application of sound reducing measures outlined in the appropriate General Plan policies. Potential development of residential uses on the Intervening Lands site as part of Alternative 5 was found to have a ***significant and unavoidable*** impact due to the proximity of residential uses to the I-80 corridor and surrounding public uses.