Chapter 5C. Public Services and Utilities

INTRODUCTION

To provide the context on which potential impacts can be assessed, this chapter presents information on existing levels of public services and utilities in the City's planning area. This information is based on communications with City of Davis Planning and Public Works staff and conversations with local utility providers. For the purposes of this analysis, public services and utilities include the following:

- law enforcement,
- emergency response,
- schools,
- libraries,
- parks,
- water supply,
- sewage and wastewater, and
- solid waste.

Setting

Law Enforcement

The Davis Police Department (DPD) currently operates out of a single station, located at 226 F Street in downtown Davis. The police department has a service area of approximately 9 square miles and provides service to approximately 54,428 City residents. The number of full-time employees is 81, of which 53 are sworn officers (City of Davis, 1999). These are supplemented by 28 part-time staff and 19 volunteer reserve officers and police cadets. Sworn officers perform law enforcement tasks as well as administration and supervision, and civilian personnel are involved, in administration, administration, support services, supervision, dispatch, parking enforcement, and community service duties. The DPD currently has 13 patrol vehicles with an additional vehicle to be added before January 2000 (Concolino pers. comm.). UC Davis has an on-campus police department that maintains a mutual aid agreement with the City for major incidents, although direct officer-to-officer communication is limited by non-compatible radio systems (Jones & Stokes Associates 1997).

The City's current service standard is to provide 1.3 officers per 1,000 population. The DPD's existing service level of 1.03 officers per 1,000 is less than the City's standard. The City Council recently approved a plan for the addition of a new police station, which is expected to break ground in March 2000 (Concolino pers. comm.).

The highest demand for police service in Davis is calls regarding property crimes (theft and burglary), domestic violence, noise complaints, and automobile theft/burglary. Calls reporting auto theft and/or burglary and domestic violence are handled by patrol officers. Calls reporting noise complaints are handled by non-sworn personnel such as a community service officer (Concolino pers. comm.). Table 5C-1 provides the most recent statistics available on typical police activities from 1995, and a comparison to similar statistics from 1991. Although calls to 911 have increased, total crime in these categories has decreased dramatically.

Typically, the City of Davis experiences a peak in calls from commercial areas during normal business hours and a peak in calls from residential areas after normal business hours (Concolino pers.comm). The demand for police services and the need for police staff are expected to grow in direct proportion to the growth of population and business.

In the spring of 2001, the police department will move to a new, 35,000 square foot facility on east Fifth Street. The new site is 6 acres in area and planned to accommodate the growth needs of the department until at least 2015. The current station, grossly undersized at 11,000 square feet in area, has limited public and police vehicle parking, and no employee parking. (City of Davis 1999.)

Table 5C-1. Calls for Police Service

Type of Call	Number of Calls		
	1991	1995	% Change
Part 1 offenses (e.g., homicide, rape, assault, burglary)	3,624	3,243	-10.5
911 calls	6,836	7,505	+9.8
Driving under influence	220	153	-30.5
Noise complaints	3,602	2,981	-17.2
Parking citations	16,699	15,552	-6.9
Moving violations	6,955	5,984	-14.0

Source: City of Davis 1999.

Emergency Response

The Davis Fire Department (DFD) provides emergency and non-emergency fire protection services within the city. UC Davis has its own fire department responsible for on-campus fire protection. Non-emergency services of the DFD include plan checking, construction inspection, fire and life safety inspections, fire code investigations, public education, and weed abatement.

Emergency services include fire response, emergency medical response, hazardous materials response, and public assistance (City of Davis 1999). The DFD has mutual aid agreements with the UC Davis Fire Department and with the City of Dixon (south of Davis), Woodland (north of Davis), and West Sacramento (east of Davis). The DFD also participates in mutual aid agreements with other districts throughout the state.

The DFD currently operates three fire stations (Figure 5C-1). Table 5C-2 shows the station locations and capital equipment (i.e., engines, reserves engines, water tender) available at each station.

Table 5C-2. Fire Stations and Major Equipment

Station No.	Location	Capital Equipment
31	530 Fifth Street (downtown core area)	1 engine, 1 reserve engine, 1 water tender, 1 squad
32	1350 Arlington Boulevard (west Davis)	1 engine, 1 grass rig
33	425 Mace Boulevard (south Davis)	1 engine, 1 reserve engine, 1 grass rig

Source: Willhoff pers. comm.

Depending on city size, typical staffing levels for fire services range from one to three firefighters per 1,000 population. At this time, the City of Davis has no adopted standard for firefighter staffing. Currently, the City operates with a firefighter/population ratio estimated at 0.81 per 1,000. (Willhoff pers. comm.)

Another measure of performance for fire services is response time. While the City has used a 5-minute response measure for some time, the method for measuring this 5-minute response has changed recently. In the past, the 5-minute response was measured as the time the truck left the station to the time it arrived at the incident scene. The current method, which is a standard used throughout the United States, is to measure the 5-minute response from the time the call is received to the time the truck arrives at the incident scene. This change has resulted in a smaller coverage area for each station.

Table 5C-3 summarizes the number of calls the DFD responded to in 1998 by land use type. The City Council recently approved a plan for the addition of a fourth fire station (Station 30) near Covell Center that would add 15 additional firefighters/captains. The funding, construction, and staffing of this new station are necessary to achieve a 5-minute response time at the current level of City development. The DFD is currently seeking funding sources for the proposed new station. (Willhoff pers. comm.) Completion of the new station is anticipated to increase the firefighter/population ratio.

Table 5C-3. Average Number of Calls by Land Use Type in 1998

Land Use Type	Number of Calls
Commercial	1,017
Residential	1,223
Other (vehicle accidents)	298
Total	2,538

Source: Wilhoff pers. comm.

Schools

The City of Davis Joint Unified School District (DJUSD) is the primary provider of educational services for the City's planning area. DJUSD schools and other characteristics are shown below in Table 5C-4.

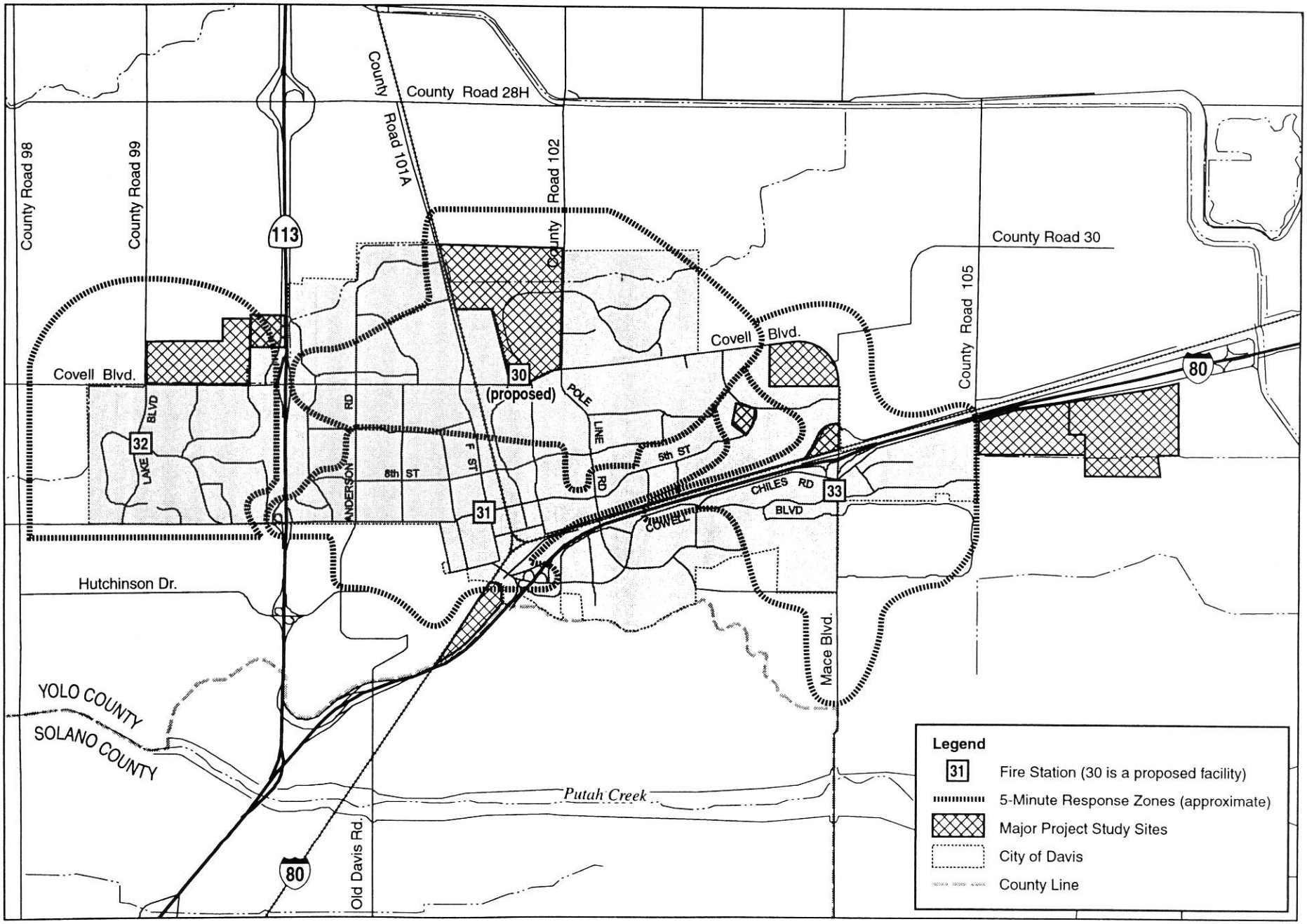
Table 5C-4. Characteristics of the Davis Joint Unified School District

School	Student/Teacher Ratios	1998/1999 Enrollment	1999/2000 Enrollment	Existing Capacity
	18.5:1 (K-3)			
Elementary Schools (K-6)	**29.25:1 (4-6)**			
Birch Lane		532	655	716
Cesar Chavez		542	538	621
Fairfield		60	60	58
North Davis		560	579	605
Patwin		566	549	605
Pioneer		706	720	734
Robert Willet		593	652	621
Valley Oak		614	654	681
Junior High Schools (7-9)	**32.75:1**			
Ralph Waldo Emerson		756	815	1,005
Oliver Wendell Holmes		1,091	1,065	1,062
High School (10-12)	**34:1**			
Davis Senior High		1,631	1,766	1,900
King High (independent study)		53	51	68

Source: City of Davis Joint Unified School District 1999.

n/a = not available.

The DJUSD's enrollment was 7,704 students (grades K-12) in the 1998/1999 school year, with a projected enrollment of 8,104 students for the 1999/2000 school year for grades K-12 (Table



Jones & Stokes Associates, Inc.

Figure 5C-1
Fire Station 5-Minute Response Zones

5C-4) (Draft 1999 Davis General Plan). Many of the schools currently depend on portables to meet capacity requirements (Table 5C-5). Future enrollment growth will be accommodated by additional portable classrooms. Potential constraints on future capacity include reduced area for additional classrooms and district policy that does not provide for year-round schools (a year-round schedule can increase capacity by 25 percent). For determining future facility needs, the DJUSD uses the information shown in Table 5C-6. This table shows the student generation rates used in determining the impact of new developments.

Table 5C-5. Classroom Size and Portable Reliability

School	Number of Permanent Classrooms	Number of Portables
Birch Lane	20	14
Cesar Chavez	17	11
Fairfield	2	0
North Davis	16	13
Patwin	15	11
Pioneer	19	13
Robert Willett	17	10
Valley Oak	16	13
Ralph Waldo Emerson	24	14
Oliver Wendell Holmes	26	17
Davis Senior High	45	25
King High (independent study)	1	1

Source: City of Davis Joint Unified School District 1999.

Table 5C-6. Student Generation by Residential Type

Land Use Type	Yield Rate
Single-family residential	0.69
Multifamily residential	0.44

Source: Hippler pers. comm..

Libraries

The Yolo County, Davis Branch Library provides library service to residents in the planning area from a building located at 315 East 14th Street. The library is a 30,000-square-foot facility with a building size based on a ratio of one-half square foot per capita of service population. The current library exceeds this standard by about 2,000 square feet.

The library has a minimum materials standard of two volumes per capita at a current average price of $25. The library currently provides approximately 120,000 volumes, which equates to about 2.2 volumes per capita. Staffing standards are one full-time equivalent (FTE) staff member per 2,500 people in the service area. Using this ratio, the current population would equate to a need for 22 FTE staff persons. The library currently is staffed with 14.5 FTE. (Johnstone pers. comm.)

The above standards are based on City population and do not factor in the UC Davis library facilities, which provide library services to students and others residing in the City. Yolo County has no current plans for construction of other facilities in the Davis area but has engaged in preliminary discussion with Yolo County about a satellite facility in south Davis. (Johnstone pers. comm.)

Parks and Recreation

The Davis Parks and Community Services Department provides parks and recreation facilities, and is responsible for a variety of recreational programs for the City. In addition, City schools, UC Davis, and various private organizations provide additional recreational facilities and services.

The City's parks are characterized by a classification system based on the 1987 General Plan (Table 5C-7). Figure 5C-2 shows the approximate location of existing and planned parks. The City's existing parks total approximately 236 acres, and 300 acres are being planned for future park uses. The City and the DJUSD have a long-standing tradition of planning parks adjacent to schools. allowing joint use of grounds to meet recreational and educational needs.

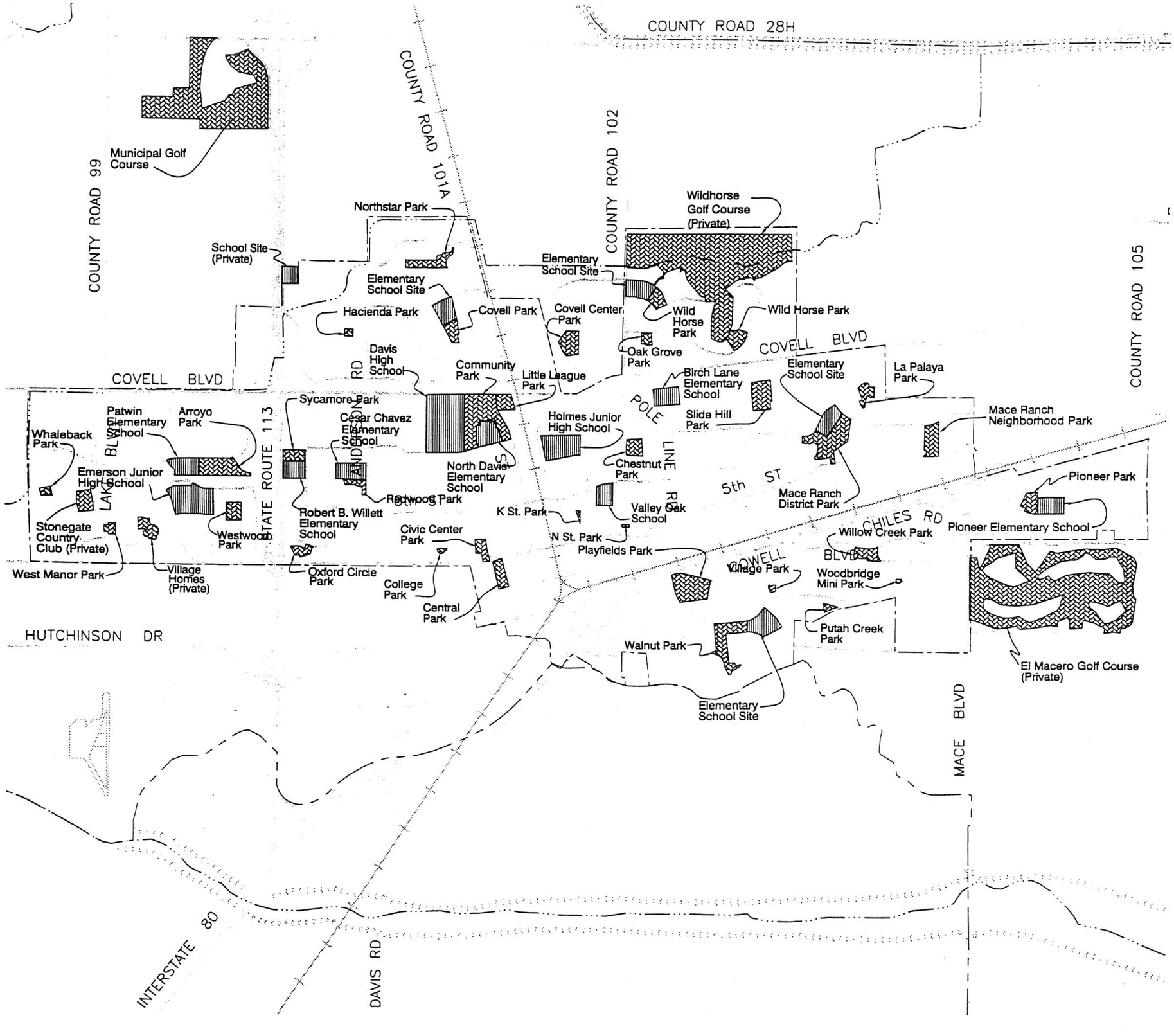
Table 5C-7. Park Classification System

Park Type	1998 Park Acreage	1998 Ratio (Acres/1,000 Population) [a]	Standard (Acres/1,000 Population)	Acres Needed to Achieve Standard
Standard Recreation				
Community parks	68.5	1.3	1.8	29.5
Neighborhood parks	65.7	1.2	1.8	32.3
Mini-parks	7.8	0.1	0.2	3.1
Other parks	5.8	0.1	1.2	59.5
Subtotal	147.8			
Special Use				
Special use parks	88.0	1.6	none	n/a

[a] Assumes a 1998 population of 54,428. Calculations used to determine maximum park land dedication requirements (i.e., Quimby Act requirements) are estimated separately by the City, and are not reflected in this analysis.

n/a = not applicable.

Figure 5C-2
Existing and Proposed Parks and School Sites



Parks

Schools

Davis General Plan

100 acres

25

0 1000 3000 5000'

Planned Facilities. The City is planning to build two neighborhood parks, one in north-central Davis and one in the east Davis/Mace area. The north-central site would be a 7-acre park with one field for soccer/football/rugby. The east Davis site would be a 6.9-acre site with two youth softball/baseball fields and one soccer/football/rugby field. The City's Recreation and Parks Master Plan includes two regional parks, one in north-central Davis and an extension of the existing Davis Municipal Golf Course; the estimated acreage is 68 and 148.8 acres, respectively, but neither is currently funded. (Hippler pers. comm.)

Recreational Programs. The Davis Parks and Community Services Department independently operates various recreation programs and works with other cosponsored athletic organizations, hobby, service, and social organizations that use public facilities. Examples of programs include City of Davis Adult Softball, City of Davis Gymnastics Team, and City of Davis Adult Basketball. The City also provides recreation programs via City-sponsored groups, such as Davis Little League, Davis Aquadarts, Davis Youth Soccer League, and Davis Rugby Club. The Davis Senior High School also contributes to City recreation programs through various high school sports, such as basketball, football, swimming, and diving, all of which use City facilities during appropriate seasons. UC Davis provides another dimension to the types of recreation activities available through its own extensive athletic programs, which include several intramural and intercollegiate sports. UC Davis programs, although independently run, provide many spectator opportunities to the community at large. (Hippler pers. comm.)

Water

The City's Public Works Department is responsible for providing potable water for an estimated 55,000 customers through 12,530 service connections (all hookups must be permitted) within the City limits and the unincorporated area of El Macero (Weir pers. comm.). In addition, the Willowbank area, outside the current City limits, is expected to be served by City water in the near future. Water is provided for fire protection as well as domestic use. The City also has one service connection installed to provide water to a mobile home park outside the City and shares two connections with the UC Davis water system for mutual aid use during emergency situations (City of Davis 1999).

The City relies solely on groundwater for its water supply, which is supplied by 21 operating wells that range in depth from 330 feet to more than 1,450 feet (Jones & Stokes Associates 1997). The average volume delivered from each well is approximately 1,240 gallons per minute, and the average annual withdrawal from all wells is approximately 12,800 acre-feet (Jones & Stokes Associates 1997). Current water consumption rates average 240 gallons per person per day. Because of water conservation programs and improved efficiency, this consumption is projected to decrease to 210 gallons per person per day in the future (Weir pers. comm.). Table 5C-8 provides a breakdown of daily water consumption by land use type.

Table 5C-8. Current Water Consumption Rate Averages by Land Use Type

	Single-Family Residential (MGD)	Multifamily Residential (MGD)	Small Commercial (MGD)	Large Commercial (MGD)	Irrigation/ Other (MGD)	City (MGD)	Total (AF/Year)
Current	5.5	2.2	0.6	0.45	0.28	0.54	11,000

Notes: AF = acre feet.
MGD = million gallons per day.

Source: Weir pers. comm.

The quantity of groundwater available would support the anticipated demand under the current General Plan. With regard to facilities, however, pumping capacities will need to be increased to support planned buildout (Weir pers. comm.). Trunk facilities to carry water to areas in the City are designed to handle the projections in the current General Plan with little excess capacity in many locations (Fitzsimmon pers. comm.).

Sewage and Wastewater

The City's Public Works Department provides sewer service to the planning area. The City's wastewater treatment plant is located approximately 6 miles northeast of Davis, on County Road 28H, immediately east of the Yolo County Landfill. Sewer service is controlled through the use of connection fees and through requirements contained in the City's sewer ordinance.

The City operates more than 150 miles of sewer lines that connect to a City-operated 7.5-million-gallons-per-day (MGD) wastewater treatment facility. Average sewage and wastewater generation rates per person are estimated at 90 gallons per person per day. Average wastewater generation rates for land use types are estimated at 222 gallons per dwelling unit for single-family residential areas. Multi-family residential areas generate an average of 155 gallons per dwelling unit, which is approximately 70% of the rates generated by single family residential areas (Debra pers. comm.). Commercial and industrial use are estimated by assuming 52 employees per acre and a generation rate of 15 gallons per employee per day for an average wastewater generation rate of 780 gallons per acre per day. (Weir pers. comm.)

The wastewater system currently operates at approximately 68% of design capacity. This capacity includes the $11 million expansion of the plant, which brought the total capacity to 7.5 MGD, and was substantially complete in April 1999.

A 396-acre wetlands demonstration project at the Yolo Basin Wetlands Davis site immediately east of the wastewater treatment plant has been completed. This project combined treated wastewater with stormwater runoff to create a restored wetland and wildlife habitat and improves the wastewater treatment process before discharge (City of Davis 1999).

The treatment plant has 120 acres of 8-foot-deep secondary treatment oxidation ponds. After it is treated, effluent is discharged to Willow Slough (a tributary of the Yolo Bypass), where it is used for irrigation during summer; in winter, the effluent flows into the Delta. (Jones & Stokes Associates 1997.)

Several of the City's large-diameter concrete pipes have sustained deterioration and corrosion by hydrogen sulfide attack. The City has responded by implementing inspection, regular maintenance, and planned rehabilitation/capitol improvement projects (Weir pers. comm.).

Current wastewater treatment and trunk pipeline capacity is expected to accommodate demand through 2010 as projected by the current General Plan. However, little excess capacity will exist in the system to handle additional development (Fitzsimmon pers. comm.).

Other current constraints on the system include providing service to areas outside the City limits, specifically to the El Macero Country Club (including residential units) and the North Davis Farms near the Davis Municipal Golf Course. The City anticipates any increases in flow from development to be contained accordingly in sewer lines. In addition, sewer lift stations have been sized to meet future needs, and recent monitoring of sewage flows in south Davis have been performed to determine the need for pump capacity improvements. (Weir pers. comm.)

Solid Waste

Solid waste services (collection and recycling) are provided by Davis Waste Removal, a private firm under contract to the City. All nonrecyclable wastes collected from the City are disposed of at the 770-acre Yolo County Central Landfill in the northeast portion of the planning area. The City does not contain any special landfill sites (City of Davis 1999). Average solid waste generation rates are calculated using a per capita factor derived by dividing total solid waste by the current population (as measured at the disposal site). Although done on a per capita basis, this rate reflects all land uses within the City. The current per person generation rate in the City is estimated at 3.12 pounds per day. The City participates in extensive waste reduction programs, which are described in detail in the City's General Plan update.

The landfill has an estimated capacity of 25 million cubic yards. As of June 1999, 8.2 million cubic yards of capacity had been filled. The remaining lifespan of the landfill is estimated to be 20 years at current levels of disposal (Weir pers. comm.). The estimated year 2020 closure of the landfill is based on SACOG population projections for Yolo County and its cities, factored by current levels of waste production. (Yazdani pers. comm.)

Sites Being Studied

For purposes of assessing the impacts associated with each land use map alternative, impacts were evaluated on an aggregate basis for the service/utility in question. For many of the services/utilities in question, these are evaluated by looking at per capita generation/use rates. This aggregation is a typical method of measuring service provision. For other services/utilities, the evaluation of impacts needed to look at a system as a whole (such as sewer and water service), and not focus on an individual site's impact by itself.

All of the sites being studied are currently undeveloped, and therefore, existing conditions on these sites are not described here. It is assumed that utility infrastructure needed to service these sites, both on and adjacent to them, will be required and funded by the project proponent with any project approvals on these sites.

Regulatory Setting

California law allows schools to exempt classroom and related facilities from city zoning requirements (Government Code Section 53094). In addition, schools are constructed under special building codes, including enhanced requirements for seismic safety, and are inspected under the auspices of the state, rather than by the city building department. As explained in detail in Chapter 6, funding for new schools relies upon a combination of state funding, school district tax-based funding (including general obligation bonds and parcel taxes), and development impact fees. Impact fees are generally limited under the provisions of SB 50/Proposition 1A legislation passed in 1998. The funding provided under that legislation is intended to fully mitigate school impacts and no additional impact fees may be imposed.

Wastewater disposal is regulated by the Central Valley Regional Water Quality Control Board. This state agency establishes standards for the city treatment plant to ensure that its operations will not adversely affect surface and ground waters.

The California Integrated Waste Management Act of 1989 (Public Resources Code Section 40000 et seq.) requires each county and its cities to adopt an Integrated Waste Management Plan that establishes standards for solid waste disposal and recycling. That plan is certified by the State Integrated Waste Management Board as to compliance with the Act. The Act requires cities and counties to reduce the waste stream being disposed of in landfills, to provide for the safe collection of household hazardous wastes, and to expand recycling and reuse programs. The countywide plan also establishes criteria for siting landfills. The Yolo County landfill is administered by the County Department of Planning and Public Works Division of Integrated Waste Management.

Public services and capital improvements are financed through general and specific taxes, benefit assessments, and development impact fees. State law under Propositions 13 and 218 which establish constitutional limitations on the imposition of taxes, assessments, and service fees, as well

as the Mitigation Fee Act (Government Code Section 66000 et seq.), establishes the framework within which the City operates. General limitations include the following: a general tax may only be levied upon majority approval of City voters; a special tax may only be levied upon 2/3 approval of voters; benefit assessments require a majority vote of affected property owners and each assessment must be proportional to the direct benefit being received by each parcel being assessed (assessments cannot be used to finance projects with only general benefits); imposing or increasing some types of property-related service fees requires a popular vote; and impact fees can be used only for capital improvements, not operations and maintenance costs, and each fee (i.e., road improvements, traffic signals, etc.) must be accounted for individually (the City does this through its Development Fee Impact Study and Resolution). The Quimby Act (Government Code Section 66477) authorizes the City to exact land or in lieu fees for parks and recreation uses as part of the approval of new subdivisions at a ratio of up to 5 acres per 1000 residents.

IMPACTS AND METHODOLOGY

The remainder of this chapter presents an assessment of potential impacts on public services and utilities. Impacts assessed include the potential to increase demand for public services and utilities and potential to require need for additional infrastructure. For each impact, the assessment is programmatic in nature. This analysis will provide an assessment of the overall potential impacts related to implementation of the General Plan, and will provide appropriate mitigation to reduce the project's effects on public service and utilities. This analysis is based on information provided by communications with City of Davis Planning and Public Works staff, and through conversations with local service providers.

Projected population and housing ranges under the four land use map alternatives are very similar to the levels predicted with the development parameters set out in the City's existing General Plan. Under the 1987 plan, the population at build out in 2010 would be approximately 65,222. Under the most intensive of the alternatives (Alternative 5), the projected population is 65,458, a change of only 236 persons. Table 5C-9 provides a summary by alternative of these statistics.

Table 5C-9. Housing and Population Change by Land Use Map Alternative

	Housing Units	Housing Change from 1998	Population	Population Change from 1998
1998 Conditions	22,405	n/a	54,428	n/a
Alternative 2	26,779	+ 4,374	65,222	+ 10,794
Alternative 3	25,486	+ 3,081	62,073	+ 7,645
Alternative 4	26,316	+ 3,911	64,094	+ 9,666
Alternative 5	26,876	+ 4,471	65,458	+ 11,030

For all of the land use map alternatives, the increase in demand for electricity and natural gas was within the service plans for the region and City. None of the alternatives is expected to have

a significant effect on these during the planning period, and provision of these utilities was not evaluated further in this chapter.

Applicable Policies

The existing and proposed General Plans contains a number of goals, policies, standards, and actions that are designed to reduce or eliminate potential environmental impacts that may be related to the implementation of the plans. In assessing public services and utilities impacts, Alternative 2 assumes implementation of the General Plan and the goals, policies, standards, and actions it contains. In evaluating the public services and utilities impacts associated with Alternatives 3 through 5, it is assumed that the goals, policies, standards, and actions contained in the General Plan update will be implemented with all future projects.

In this section, the following applicable policies were applied to the impact assessment for Alternatives 3 through 5.

Goals and Policies Specific to Police and Fire

GOAL POLFIRE 1. Provide high quality police and fire protection services to all areas of the City.

- **Policy POLFIRE 1.2.** Develop and maintain the capacity to reach all areas of the City with emergency police and fire service within a 5-minute emergency response time for 90 percent of all calls.

GOAL POLFIRE 3. Increase fire safety through provision of adequate fire protection infrastructure, public education, and outreach programs.

Goals and Policies Specific to Youth and Education

GOAL Y&E 8. Plan for the cost of new school facilities when planning for specific new residential development.

- **Policy Y&E 8.1.** Require full mitigation of school impacts resulting from new residential development within the boundaries of the City, to the extent legally permissible.

- **Action Y&E 8.1k.** Work with the DJUSD to develop procedures to incorporate school site location and acquisition as part of the planning process for annexations, general plan amendments, specific plans, and zoning.

- **Action Y&E 8.1l.** Provide for the dedication or reservation of school sites meeting general plan standards at the earliest possible stage in subdivision maps.

GOAL Y&E 9. Construct new public schools to meet the needs of residential growth.

- **Policy Y&E 9.1.** The City shall aid in financing and construction of new public schools to ensure the full mitigation of impacts of new development on school facilities, to the extent legally feasible.

- **Action Y&E 9.1e.** Cooperate with the DJUSD to the extent authorized by law to establish school funding mechanisms in new subdivisions and in-fill development to ensure that the impacts of such development are fully mitigated.

Goals and Policies Specific to Parks and Open Space

GOAL POS 1. Provide parks, open space, and recreation facilities and programs to meet the current and future needs of Davis residents.

GOAL POS 3. Identify and develop linkages, corridors, and other connectors to provide an aesthetically pleasing and functional network of parks, open space areas, greenbelts, and bike paths.

- **Action POS 3.1a.** Ten percent of the area in new residential development shall be greenbelt.

- **Policy POS 3.2.** Develop a system of greenbelts and access-ways in new and non-residential development areas. Implement specific projects to augment the existing greenbelt/open space system.

GOAL POS 4. Distribute parks, open spaces, and recreation facilities and programs throughout the City.

- **Policy POS 4.2.** Construct new parks and recreation facilities. Proceed with park and open space planning by pursuing all the varying uses of open space as opportunities are identified.

GOAL POS 6. Encourage local organizations, UC Davis, the DJUSD, and private organizations to provide, develop, and maintain needed parks, open space, recreation facilities, programs, activities, and special events.

- **Action POS 6.1f.** Encourage and support development and maintenance of recreation and park facilities by the private sector.

- **Policy POS 6.2.** Require dedication of land or payment of in-lieu fees for park and recreation purposes as a condition of subdivision approval.

GOAL POS 7. Reflect a balance between preservation, education, recreation, and public health and safety in park and open space planning.

Goals and Policies Specific to Water

GOAL WATER 1. Minimize increases in water use.

- **Policy WATER 1.1.** Give priority to demand reduction and conservation over additional water resource development.
- **Policy WATER 1.2.** Require water conserving landscaping.
- **Policy WATER 1.3.** Do not approve future development within the City unless an adequate supply of water is available or will be provided prior to occupancy.

GOAL WATER 2. Ensure sufficient supply of high quality water.

- **Policy WATER 2.1.** Provide for current and long-range water needs of the Davis planning area.
- **Policy WATER 2.2.** Manage groundwater resources so as to preserve quantity and quality.

Goals and Policies Specific to Materials, Solid Waste, and Recycling

GOAL MAT 1. Enhance environmental quality by conserving resources and minimizing waste.

- **Policy MAT 1.1.** Promote reduced consumption of nonrenewable resources.

GOAL MAT 2. Provide adequate waste disposal capacity for Davis.

- **Policy MAT 2.1.** Plan for long-term waste disposal needs of Davis.

Summary of Impacts Related to Land Use Map Alternatives

This chapter evaluates public service and utility impacts related to the General Plan update and establishment of a new junior high school, including the four land use map alternatives. For this evaluation, impacts have been assessed in ten categories. Table 5C-10 provides an overview of the significance findings made for the General Plan update project and each of the sites being studied

under each alternative. The table also shows the impacts related specifically to the proposed junior high school site under the heading "Signature Site" for Alternatives 4 and 5.

In evaluating public service and utility provision, especially on a general plan level, it is common to use per capita standards. These standards look at the overall provision of a service or utility, and divide the service/utility provided by the current population. For instance, solid waste production on a per capita basis is calculated by taking the total waste taken to the landfill by the current population. This aggregation provides a good estimation when looking at impacts on a programmatic scale, such as with a general plan. This per capita estimation has difficulty in assessing impacts related to a specific project, such as the demands from a specific business park development. Given that there are not specific projects being evaluated on the sites being studied, it is difficult to predict exact usage. Therefore, the information presented in this chapter may need to be supplemented with project specific CEQA assessments as appropriate in the future.

The following paragraphs provide a brief summary of each impact.

- **Impact PS-1. Consistency with General Plan Policies.** Each land use map alternative was assessed for consistency with the applicable policies (existing General Plan for Alternative 2 and the General Plan update for Alternatives 3 through 5). Each land use map alternative was found to be consistent with the applicable policies. The impacts of Alternatives 3 through 5 related to changes in policy were also assessed and found to not adversely effect the environment.

- **Impact PS-2. Increased Demand for Law Enforcement Services.** This impact was designed to assess each land use alternative for its effect upon the demand for additional law enforcement services (new police officers). The need for additional police services are measured using a City-standard of 1.3 officers per 1,000 persons. Since all land uses create some demand for police service, and since service standards are based on population ratios, this demand was assessed for the overall growth projected for each land use alternative, and was not assessed for each individual site being studied. From the perspective of the physical environment, policies are provided to ensure adequate coverage. As population and development increase, there will be fiscal impacts associated with the provision of additional officers and equipment. These fiscal impacts were found to not be the subject of this EIR, but were evaluated in the fiscal study prepared for the General Plan, and incorporated by reference herein. Overall, the land use map alternatives were found to have a less than significant impact upon increased demand for law enforcement services since policies have been provided requiring adequate coverage for all new projects.

- **Impact PS-3A. Increased Demand for Fire Protection Services.** Each land use alternative was assessed for its effect upon demand for fire protection services. The need for additional fire personnel is measured using a ratio of 1 firefighter per 1,000 persons currently used by the City. Since all land uses create some demand for fire service, and since service standards are based on population ratios, this demand was assessed for the

overall growth projected for each land use alternative, and was not assessed for each individual site being studied. As population and development increase, there will be fiscal impacts associated with the provision of additional fire personnel and equipment. These fiscal impacts were found to not be the subject of this EIR, but were evaluated in the fiscal study prepared for the General Plan, and incorporated by reference herein. Overall, the land use map alternatives were found to have a less than significant impact upon increased demand for fire services since policies have been provided requiring adequate coverage for all new projects.

- **Impact 3B. Adequacy of Fire Protection Infrastructure.** This impact was designed to assess each of the land use alternatives for its effect upon the need for new or modified fire protection infrastructure. The primary measure of this impact is response time from existing/propose fire stations. As shown on Figure 5C-1, several areas of the City (existing developed areas of the City, in-fill areas, and other sites being studied) are not covered by the current (without Station 30) and future (with Station 30) fire infrastructure. All of the land use map alternatives were found to have a significant and unavoidable impact upon the need for additional fire protection infrastructure due to their existing and planned development outside the City's 5-minute response area.

- **Impact PS-4. Impacts on Existing School System.** Each land use alternative was assessed for its effect upon the expansion of the existing school system. Under current state law, all development is assumed to have some impact on school facilities. State law also specifies that the collection of standardized fees (based on new dwelling units and square footage for non-residential uses) has been determined to be adequate mitigation for all school facility requirements. Based on these assumptions, this impact was assessed for the overall impact of each land use map alternative, and was not assessed for each individual site being studied. For Alternatives 2 through 5, impacts on the school system were found have a less than significant effect.

- **Impact PS-5. Impacts on Library System.** Each land use alternative was assessed for its effect upon the expansion of the existing library system. The need for additional library services is measured using planning guidelines provided by Yolo County (the service provider for library services in the City). Since all land uses create some demand for library services, and since service standards are based on population ratios, this demand was assessed for the overall growth projected for each land use alternative, and was not assessed for each individual site being studied. Alternatives 2 through 5 were found to have a significant effect related to the need for additional library space and materials in the future. Mitigation was proposed to reduce this impact to a less than significant level (PS-5.1).

- **Impact PS-6. Impacts on Park and Recreation Facilities.** Each land use alternative was assessed for its effect upon the need for park and recreational facilities. The need for additional park and recreation facilities is measured using planning guidelines established by the City. Although the primary demand for park and recreation services

are residential uses, all land uses create some demand. Since service standards are based on population ratios, this demand was assessed for the overall growth projected for each land use alternative, and was not assessed for each individual site being studied. Alternatives 2 through 5 were found to have a less than significant impact these resources based on existing and proposed plans.

- **Impact PS-7. Impacts on Water Supply and Distribution Facilities.** Each land use alternative was assessed for its effect upon the demand for water and water distribution infrastructure. Under each of the land use map alternatives, the City will have sufficient water supplies available to serve existing and future planned development. Regarding water distribution and storage facilities, the City has determined that it has adequate facilities to handle the demands planned under buildout of the existing General Plan. This would mean that Alternatives 2 and 3 can be supplied by existing or planned infrastructure. For Alternative 4 (Oeste Campus site) and Alternative 5 (Davis Technology Campus and Intervening Lands sites), existing and planned water distribution infrastructure was determined to be inadequate to handle the demands of these projects, and would therefore result in a significant and unavoidable impacts.

- **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. Regarding sewer collection and treatment infrastructure, the City has determined that it has adequate facilities to handle the demands planned under buildout of the existing General Plan. This would mean that Alternatives 2 and 3 were found to have a less than significant impact upon requiring the extension of wastewater infrastructure and capacity. For Alternative 4 (Oeste Campus site) and Alternative 5 (Davis Technology Campus and Intervening Lands sites), existing and planned sewer/wastewater collection infrastructure was determined to be inadequate to handle the demands of these projects, and would therefore result in a significant and unavoidable impacts.

- **Impact PS-9. Impacts on Solid Waste Landfill Capacity.** Each land use map alternative was assessed for its impact on landfill capacity. Solid waste generation for each land use alternative is measured using a factor based on population (current solid waste generation divided by current population). Using this approach, impacts were assessed using overall population growth projected under each land use alternative, and were not assessed for each individual site being studied. Alternatives 2 through 5 were found to have a less than significant impact since they would not generate solid waste flows above planned capacities.

Table 5C-10. Summary of Public Services and Utilities Impacts by Alternative

Project Impacts	Project Mitigations	Overall General Plan	Sites Being Studied									In-fill
			Nishi/Gateway	Covell Center	Signature Site	Mace Ranch	Under Second Street	Sutter-Davis	Oeste Campus	Davis Technology	Intervening Lands	
Alternative 2. Buildout to 2010 Using Existing General Plan												
PS-1. Consistency with General Plan Policies	Not required	LS	LS	LS		LS	LS					LS
PS-2. Increased Demand for Law Enforcement Services	Not required	LS										
PS-3A. Increased Demand for Fire Protection Services	Not required	LS										
PS-3B. Adequacy of Fire Protection Infrastructure	N/A	SU	SU	S NI[1]		SU	NI					SU
PS-4. Impacts on Existing School System	Not required	LS										
PS-5. Impacts on Library System	PS-5.1	S										
PS-6. Impacts on Park and Recreation Facilities	Not required	LS										
PS-7. Impacts on Water Supply and Distribution Facilities	Not required	LS	LS	LS		LS	LS					LS
PS-8. Impacts on Sewer Mains and Capacity, and Expansion of Treatment Facilities	Not required	LS	LS	LS		LS	LS					LS
PS-9. Impacts on Solid Waste Landfill Capacity	Not required	LS										
Alternative 3. Reduced Buildout Scenario												
PS-1. Consistency with General Plan Policies	Not required	LS		LS		LS	LS					LS
PS-2. Increased Demand for Law Enforcement Services	Not required	LS										
PS-3A. Increased Demand for Fire Protection Services	Not required	LS										
PS-3B. Adequacy of Fire Protection Infrastructure	N/A	SU		S NI[1]		SU	NI					SU
PS-4. Impacts on Existing School System	Not required	LS										
PS-5. Impacts on the Library System	PS-5.1	S										
PS-6. Impacts on Park and Recreation Facilities	Not required	LS										
PS-7. Impacts on Water Supply and Distribution Facilities	Not required	LS		LS		LS	LS					LS

Table 5C-10. Summary of Public Services and Utilities Impacts by Alternative

Project Impacts	Project Mitigations	Overall General Plan	Sites Being Studied									In-fill
			Nishi/Gateway	Covell Center	Signature Site	Mace Ranch	Under Second Street	Sutter-Davis	Oeste Campus	Davis Technology	Intervening Lands	
PS-8. Impacts on Sewer Mains and Capacity, and Expansion of Treatment Facilities	Not required	LS		LS		LS	LS					LS
PS-9. Impacts on Solid Waste Landfill Capacity	Not required	LS										
Alternative 4. Community Expansion Scenario with Oeste Campus												
PS-1. Consistency with General Plan Policies	Not required	LS	LS	LS	LS	LS	LS	LS	LS			LS
PS-2. Increased Demand for Law Enforcement Services	Not required	LS										
PS-3A. Increased Demand for Fire Protection Services	Not required	LS										
PS-3B. Adequacy of Fire Protection Infrastructure	N/A	SU	SU	S NI[1]	NI	SU	NI	SU	NI			SU
PS-4. Impacts on Existing School System	Not required	LS										
PS-5. Impacts on the Library System	PS-5.1	S										
PS-6. Impacts on Park and Recreation Facilities	Not required	LS										
PS-7. Impacts on Water Supply and Distribution Facilities	PS-7.1	SU	LS	LS	LS	LS	LS	LS	SU			LS
PS-8. Impacts on Sewer Mains and Capacity, and Expansion of Treatment Facilities	PS-7.1 PS-8.1	SU	LS	LS	LS	LS	LS	LS	SU			LS
PS-9. Impacts on Solid Waste Landfill Capacity	Not required	LS										
Alternative 5. Community Expansion Scenario with Davis Technology Campus												
PS-1. Consistency with General Plan Policies	Not required	LS	LS	LS	LS	LS	LS	LS		LS	LS	LS
PS-2. Increased Demand for Law Enforcement Services	Not required	LS										
PS-3A. Increased Demand for Fire Protection Services	Not required	LS										
PS-3B. Adequacy of Fire Protection Infrastructure	N/A	SU	SU	S NI[1]	NI	SU	NI	SU		SU	SU	SU
PS-4. Impacts on Existing School System	Not required	LS										
PS-5. Impacts on the Library System	PS-5.1	S										

Table 5C-10. Summary of Public Services and Utilities Impacts by Alternative

Project Impacts	Project Mitigations	Overall General Plan	Sites Being Studied									In-fill
			Nishi/Gateway	Covell Center	Signature Site	Mace Ranch	Under Second Street	Sutter-Davis	Oeste Campus	Davis Technology	Intervening Lands	
PS-6. Impacts on Park and Recreation Facilities	Not required	LS										
PS-7. Impacts on Water Supply and Distribution Facilities	PS-7.1	SU	LS	LS	LS	LS	LS	LS		SU	SU	LS
PS-8. Require Extension of Sewer Mains and Capacity, and Expansion of Treatment Facilities	PS-7.1 PS-8.1	LS	LS	LS	LS	LS	LS	LS		SU	SU	LS
PS-9. Impacts on Solid Waste Landfill Capacity	Not required	LS										

SU = Significant unavoidable
S = Significant, but can be reduced to less than significant with mitigations included
LS = Less than significant
NI = No impact
N/A = None available

= This impact was assessed on a program (aggregate) level for the overall General Plan, rather than on a site-specif basis.

1 Covell Center has a short-term significant and long-term no impact finding. See text for explanation.

Project Impacts

Impact PS-1. Consistency with General Plan Policies

Significance Criteria

- A significant impact would occur if the land use map alternative or one of its components would conflict with the environmental plans and goals of the local community or other planning regulations.
- For Alternatives 3 through 5, a significant impact would occur if a policy change in the General Plan update would result in a substantial adverse change in the environment related to public services and utilities.

Impacts of the proposed project related to General Plan consistency was assessed with application of the above significance criteria. Table 5C-11 provides an overview/comparison of the level of impact associated with the General Plan under the four land use map alternatives evaluated in this EIR. A more detailed discussion of each alternative is described below.

Table 5C-11. General Plan Policy Consistency under Each Land Use Map Alternative

Alternative 2	Alternative 3	Alternative 4	Alternative 5
• No conflicts. Consistent with public service and utility policies	• No conflicts. Consistent with public service and utility policies	• No conflicts. Consistent with public service and utility policies	• No conflicts. Consistent with public service and utility policies

Alternative 2. Buildout to 2010 Using Existing General Plan. Implementation of Alternative 2 does not conflict with applicable plans and policies; in fact, development of the sites being studied (e.g., Nishi/Gateway, Covell Center, Mace Ranch, and Under Second Street) and other potential sites in the in-fill area have been included in infrastructure and utility planning done by the City and other providers in planning for future capacity. As described, development proposed under this alternative is in keeping with adopted policies and plans, and is therefore considered to have a ***less-than-significant*** impact.

Alternative 3. Reduced Build-out Scenario. Implementation of Alternative 3 would only allow growth and development in the City to 2010 for projects that are already entitled and additions in Covell Center (Variation 3, business park). Goals and policies in the updated General Plan are intended to ensure the protection and enhancement of environmental and human resources while providing adequate public service and utility service systems for the community. For example, several policies described in the General Plan update provide for the protection of water resources and maintenance of an adequate water supply. Other policies outline the need for a quality

educational system; a superior system of parks, recreation facilities and open space network; adequate and equitable health care and human services; reliable and efficient police and fire protection services; and the responsible use of energy and natural resources.

Overall, this land use map alternative is in keeping with the development parameters contained within the existing General Plan, except with a lower overall development potential. Since plans for services and infrastructure have been designed to match the development potential of the existing General Plan, this alternative would have a ***less-than-significant*** impact.

In preparing the General Plan update, City staff has identified the primary areas of policy where the proposed update differs from the existing General Plan. A list of these major changes is listed in Chapter 3 under a section labeled "New, Expanded, or Modified Goals and Policies in the General Plan Update". From this list, the following statements represent new policy direction (in bold type) associated with public services and utilities topics.

- **Moderate increases in allowable residential densities and increases in maximum floor area ratios in commercial land uses (as part of encouraging a compact city)**

  This change in policy direction in the General Plan update will encourage additional development and development intensities within the in-fill areas of the community. This increase will place additional requirements on public services and utilities in the City. Based on limited scope of this change (in relation to the overall General Plan development), and the fact that this alternative has an overall development lower than the existing General Plan, this change is not expected to create demands above the capacity of services and utilities in the City.

Overall, the above major change in policy is not expected to increase service and utility demands above planned capacities, and will therefore have a ***less-than-significant*** environmental impact.

Alternative 4. Community Expansion Scenario with Oeste Campus. Implementation of Alternative 4 includes additional potential development sites within the planning area, including one, the Oeste Campus site, which was not included in the existing General Plan. Overall, the proposed General Plan update contains policy direction that improves overall public service and utility provision within the planning area. The inclusion of the Oeste Campus site does present the demand for additional public services and utilities that have not been included in planned capacities. Impacts on individual public services and utilities will be assessed under Impact PS-2 through PS-9 that follow. To avoid double counting of impacts, these will not be assessed here. The overall improvements in policy guidance with this alternative is seen as a positive change, and would be a ***less-than-significant*** impact.

Related to the second significance criteria (impacts related to policy changes), the major change in policy noted above under Alternative 3 (increases in in-fill intensities) is not expected to increase service and utility demands above planned capacities. This is due to the relatively small

increases (in comparison to total planning area demands) proposed and the lower development potential at the Covell Center site in comparison to the existing General Plan. Additional policy changes in the General Plan update are seen as having positive improvements in the planning for needed services and utilities in the planning area. Overall, changes in policy would have a ***less-than-significant*** environmental impact.

Alternative 5. Community Expansion with Davis Technology Campus. Implementation of Alternative 5 includes new development opportunities on the sites being studied in the General Plan update. This alternative would result in similar effects to those discussed above under Alternative 4.

Mitigation Measures

Since this impact is ***less than significant***, no mitigation is required.

Impact PS-2. Increased Demand for Law Enforcement Services

Significance Criterion

- A land use map alternative was determined to have a significant impact if development would cause a substantive increase in demand for law enforcement services that cannot be responded to by existing plans or General Plan policies.

Impacts of the proposed project related to law enforcement services were assessed with application of the above significance criteria. The need for additional police services are measured using a City-standard of 1.3 officers per 1,000 persons. Since all land uses create some demand for police service, and since service standards are based on population ratios, this demand was assessed for the overall growth projected for each land use alternative, and was not assessed for each individual site being studied. Table 5C-12 provides an overview/comparison of the number of new officers needed per thousand people associated with the four land use map alternatives evaluated in this EIR. A more detailed discussion of each alternative is provided below.

Table 5C-12. Number of New Officers Required under Each Land Use Map Alternative

Alternative 2	Alternative 3	Alternative 4	Alternative 5
14	10	13	14

Notes: These numbers reflect the number of additional officers needed to serve population growth under each land use alternative. The City's service ratio is 1.3 officers per thousand population.

Number of officers rounded to nearest whole number.

Alternative 2. Buildout to 2010 Using Existing General Plan. Development under this alternative would add 10,794 people to the service area population. Based on the City's standard of 1.3 officers per 1,000 population, anticipated development would create demand for 14 additional officers. Policies (Policies 7.3A-O) in the existing General Plan require that adequate levels of police protection services to be in place to accommodate new development. In addition, the City Council's recent approval of a new police station, expected to begin construction in March 2000, will provide additional facilities to accommodate the anticipated increase in demand for law enforcement services. As population and development increase, there will be fiscal impacts associated with the provision of additional officers and equipment. These fiscal impacts were found to not be the subject of this EIR, but were evaluated in the fiscal study prepared for the General Plan, and incorporated by reference herein. If funding or other constraints limit the City's ability to approve new development due to inadequate fire protection, there may be an adverse impact on the City's ability to meet its housing needs. Based on policies included in the existing General Plan, this impact is considered ***less than significant***.

Alternative 3. Reduced Buildout Scenario. Development under this alternative would add 7,645 people to the service area population. Based on the City's standard of 1.3 officers per 1,000 population, anticipated development would create demand for 10 additional officers. The increase in demand for law enforcement service is subject to Policies POLFIRE 1.1 and 1.2 in the General Plan update which require that adequate levels of police and fire protection services are in place to accommodate new development. In addition, the City Council's recent approval of a new police station, expected to begin construction in March 2000, will provide additional facilities to accommodate the anticipated increase in demand for law enforcement services. As population and development increase, there will be fiscal impacts associated with the provision of additional officers and equipment. These fiscal impacts were found to not be the subject of this EIR, but were evaluated in the fiscal study prepared for the General Plan, and incorporated by reference herein. If funding or other constraints limit the City's ability to approve new development due to inadequate fire protection, there may be an adverse impact on the City's ability to meet its housing needs. Based on the policies included in the General Plan update, this impact is considered ***less than significant***.

Alternative 4. Community Expansion Scenario with Oeste Campus. Development under this alternative would add 9,666 people to the service area population. Based on the City's standard of 1.3 officers per 1,000 population, anticipated development would create demand for 13 additional officers. Although this Alternative requires 3 more officers than Alternative 3, impacts would be similar, and are considered ***less than significant***.

Alternative 5. Community Expansion Scenario with Davis Technology Campus. Development under this alternative would add 10,030 people to the service area population. Based on the City's standard of 1.3 officers per 1,000 population, anticipated development would generate a demand for 14 additional officers. Although this Alternative requires 4 more officers than Alternative 3, impacts would be similar, and are considered ***less than significant***.

Mitigation Measures

Since this impact is ***less than significant***, no mitigation is required.

Impact PS-3A. Increased Demand for Fire Protection Service

Significance Criterion

- A land use map alternative was determined to have a significant impact if development would cause a substantive increase in demand for fire protection services that cannot be responded to by existing plans or General Plan policies.

Impacts of the proposed project related to fire protection services (personnel) were assessed with application of the above significance criteria. The need for additional fire personnel is measured using a ratio of 1 firefighter per 1,000 persons currently used by the City. Since all land uses create some demand for fire service, and since service standards are based on population ratios, this demand was assessed for the overall growth projected for each land use alternative, and was not assessed for each individual site being studied. Table 5C-13 provides an overview/comparison of the number of new firefighters needed for each of the four land use map alternatives evaluated. A more detailed discussion of each alternative is provided below.

Table 5C-13. Number of New Firefighters Needed under Each Land Use Map Alternative

Alternative 2	Alternative 3	Alternative 4	Alternative 5
11	8	10	11

Notes: These numbers reflect the change from the total existing service ratio of 1 firefighter per thousand population.

Numbers are rounded to the nearest whole number.

Alternative 2. Buildout to 2010 Using Existing General Plan. Development under this alternative would add 10,794 people to the service area population. Based on a standard of one firefighter per 1,000 population (the City has not adopted a standard, but this ratio is used by Davis and similar sized cities), anticipated development would require almost 11 additional firefighters. Policies 7.3A-O in the existing General Plan requires that an adequate level of fire protection services are in place to accommodate new development. As population and development increase, there will be fiscal impacts associated with the provision of additional officers and equipment. These fiscal impacts were found to not be the subject of this EIR, but were evaluated in the fiscal

study prepared for the General Plan, and incorporated by reference herein. If funding or other constraints limit the City's ability to approve new development due to inadequate fire protection, there may be an adverse impact on the City's ability to meet its housing needs. Based on policies included in the existing General Plan, this impact is considered ***less than significant***.

Alternative 3. Reduced Buildout Scenario. Development under this alternative would add 7,645 people to the service area population. Based on a standard of one firefighter per 1,000 population (the standard currently used by the City), anticipated development would require almost 8 additional firefighters. The increase in demand for fire protection service is subject to Policy POLFIRE 3.2 in the General Plan update requires that new development have adequate provision for fire safety. As population and development increase, there will be fiscal impacts associated with the provision of additional officers and equipment. These fiscal impacts were found to not be the subject of this EIR, but were evaluated in the fiscal study prepared for the General Plan, and incorporated by reference herein. If funding or other constraints limit the City's ability to approve new development due to inadequate fire protection, there may be an adverse impact on the City's ability to meet its housing needs. Based on policies included in the existing General Plan, this impact is considered ***less than significant***.

Alternative 4. Community Expansion Scenario with Oeste Campus. Development under this alternative would add 9,666 people to the service area population. Based on a standard of one firefighter per 1,000 population (the City has not adopted a standard, but this is at the lower end of standards in similar sized cities), anticipated development would require almost 10 additional firefighters. Although this Alternative requires 2 more firefighters than Alternative 3, impacts would be similar, and are considered ***less than significant***.

Alternative 5. Community Expansion Scenario with Davis Technology Campus. Development under this alternative would add 11,030 people to the service area population. Based on a standard of one firefighter per 1,000 population (the City has not adopted a standard, but this is at the lower end of standards in similar sized cities), anticipated development would require 11 additional firefighters. Although this Alternative requires 3 more officers than Alternative 3, impacts would be similar, and are considered ***less than significant***.

Mitigation Measures

Since this impact is ***less than significant***, no mitigation is required.

Impact PS-3B. Adequacy of Fire Protection Infrastructure in Order to Maintain Acceptable Levels of Service

Significance Criterion

- A land use map alternative was determined to have a significant impact if implementation of the plan would require the need for additional fire protection infrastructure (other than improvements already planned) in order to maintain acceptable levels of service (as measured by response time).

Impacts of the proposed project related to fire protection infrastructure were assessed with application of the above significance criteria. Table 5C-14 provides an overview/comparison of the impacts related to each of the four land use map alternatives evaluated. At the current time, the City has three fire stations (Stations 31, 32, and 33). As stated earlier, the City Council recently approved a plan for the addition of a fourth fire station (Station 30) near Covell Center. The DFD is currently seeking funding sources for the proposed new station. (Willhoff pers. comm.) In the short-term (assuming no Station 30), impacts to fire protection infrastructure were assessed based on a determination of whether a site was within the 5-minute response range of an existing City fire station. In the long-term situation, impacts to fire protection infrastructure were assessed based on a determination of whether a site was within the 5-minute response range of an existing City fire station and assuming an operational Station 30. Table 5C-15 provides a summary of the status of each site being studied based on fire response zones, as prepared by the City's Fire Department, and shown on Figure 5C-1.

Table 5C-14. Fire Infrastructure Impacts for Each Land Use Map Alternative

Alternative 2	Alternative 3	Alternative 4	Alternative 5
• Some areas of existing and proposed in-fill development are not within a 5-minute response zone (short- and long-term significant impacts)	• Some areas of existing and proposed in-fill development are not within a 5-minute response zone (short- and long-term significant impacts)	• Some areas of existing and proposed in-fill development are not within a 5-minute response zone (short- and long-term significant impacts)	• Some areas of existing and proposed in-fill development are not within a 5-minute response zone (short- and long-term significant impacts)

Table 5C-15. Existing and Proposed Coverage Under 5-Minute Response Criteria

Site Being Studied	Within 5-Minute Response of Existing City Station (Short-Term)	Within 5-Minute Response of an Existing City Station Plus Station 30 (Long-Term)
Nishi/Gateway	No	No
Covell Center	No	Yes
Signature	Yes	Yes
Mace Ranch	No	No
Under Second Street	Yes	Yes
Sutter-Davis	Partial	Partial
Oeste Campus	Yes	Yes
Davis Technology Campus	No	No
Intervening Lands	No	No
In-fill (and existing development)[a]	Partial	Partial

[a]Coverage of in-fill area and existing development in Davis are the same.

Alternative 2. Buildout to 2010 Using Existing General Plan. Policies 7.3A-O in the existing General Plan require that adequate levels of fire protection services are in place to accommodate development. However, the City does not have full 5-minute response coverage with its existing stations. The City Council recently began planning the addition of a new fire station (Station 30) in the Covell Center area, but final plans and funding have not been approved. Until Station 30 is operational, development at the Covell Center site would be outside existing service areas, and would be a significant short-term impact. Once operational, development at Covell Center will be covered, and no long-term impact will occur. In the short- and long-term, development at the Nishi/Gateway and Mace Ranch sites will be outside of response zones, and would be significant impacts.

Regarding existing development and proposed in-fill development in the planning area, portions will not be covered in either the short-term (without Station 30) or long-term (with Station 30 scenarios as shown on Figure 5C-1. This is a significant impact.

In the short-term, development at the Covell Center site would be ***significant***, but would be reduced to ***no impact*** by development and operation of Station 30 prior to occupancy (in keeping with POLFIRE 1.2). In the short-term, ***significant and unavoidable*** impacts will occur at Nishi/Gateway and Mace Ranch sites, and developed and proposed in-fill development in uncovered areas within the City. In the long-term, ***significant and unavoidable*** impacts will be reduced in area not covered, but will still occur at Nishi/Gateway and Mace Ranch sites, and developed and proposed in-fill development in uncovered areas within the City.

Alternative 3. Reduced Buildout Scenario. Policy POLFIRE 1.2 in the General Plan update requires that adequate levels of fire protection services be in place to accommodate development. Since the same sites are being developed under Alternatives 2 and 3, potential impacts will be the same. In the short-term, development at the Covell Center site would be ***significant***, but

would be reduced to ***no impact*** by development and operation of Station 30 prior to occupancy (in keeping with POLFIRE 1.2). In the short-term, ***significant and unavoidable*** impacts will occur at Nishi/Gateway and Mace Ranch sites, and developed and proposed in-fill development in uncovered areas within the City. In the long-term, ***significant and unavoidable*** impacts will be reduced in area not covered, but will still occur at Nishi/Gateway and Mace Ranch sites, and developed and proposed in-fill development in uncovered areas within the City.

Alternative 4. Community Expansion Scenario with Oeste Campus. Policy POLFIRE 1.2 in the General Plan update requires that adequate levels of fire protection services be in place to accommodate development. However, the City does not have full 5-minute response coverage with its existing stations. The City Council recently began planning the addition of a new fire station (Station 30) in the Covell Center area, but final plans and funding have not been approved. Until Station 30 is operational, development at the Covell Center site would be outside existing service areas, and would be a significant short-term impact. Once operational, development at Covell Center will be covered, and no long-term impact will occur. In the short- and long-term, development at the Nishi/Gateway and Mace Ranch sites will be outside of response zones, and would be significant impacts. The Sutter-Davis site is partially covered by the response zone from Station 32, and is considered to have a potentially significant impact. Once an actual project is proposed, additional evaluation should be made to determine the adequacy of fire coverage for this site.

Regarding existing development and proposed in-fill development in the planning area, portions will not be covered in either the short-term (without Station 30) or long-term (with Station 30 scenarios as shown on Figure 5C-1. This is a significant impact.

In the short-term, development at the Covell Center site would be ***significant***, but would be reduced to ***no impact*** by development and operation of Station 30 prior to occupancy (in keeping with POLFIRE 1.2). In the short-term, ***significant and unavoidable*** impacts will occur at Nishi/Gateway, Mace Ranch, and Sutter-Davis (partial coverage) sites, and developed and proposed in-fill development in uncovered areas within the City. In the long-term, ***significant and unavoidable*** impacts will be reduced in area not covered, but will still occur at Nishi/Gateway, Mace Ranch, and Sutter-Davis (partial coverage) sites, and developed and proposed in-fill development in uncovered areas within the City.

Alternative 5. Community Expansion Scenario with Davis Technology Campus. Policy POLFIRE 1.2 in the General Plan update requires that adequate levels of fire protection services be in place to accommodate development. However, the City does not have full 5-minute response coverage with its existing stations. The City Council recently began planning the addition of a new fire station (Station 30) in the Covell Center area, but final plans and funding have not been approved. Until Station 30 is operational, development at the Covell Center site would be outside existing service areas, and would be a significant short-term impact. Once operational, development at Covell Center will be covered, and no long-term impact will occur. In the short- and long-term, development at the Nishi/Gateway, Mace Ranch, Intervening Lands, and Davis Technology Campus sites will be outside of response zones, and would be significant impacts. The

Sutter-Davis site is partially covered by the response zone from Station 32, and is considered to have a potentially significant impact. Once an actual project is proposed, additional evaluation should be made to determine the adequacy of fire coverage for this site.

Regarding existing development and proposed in-fill development in the planning area, portions will not be covered in either the short-term (without Station 30) or long-term (with Station 30 scenarios as shown on Figure 5C-1. This is a significant impact.

In the short-term, development at the Covell Center site would be ***significant***, but would be reduced to ***no impact*** by development and operation of Station 30 prior to occupancy (in keeping with POLFIRE 1.2). In the short-term, ***significant and unavoidable*** impacts will occur at Nishi/Gateway, Mace Ranch, Sutter-Davis (potential), Intervening Lands, and Davis Technology Campus sites, and developed and proposed in-fill development in uncovered areas within the City. In the long-term, ***significant and unavoidable*** impacts will be reduced in area not covered, but will still occur at Nishi/Gateway, Mace Ranch, Sutter-Davis (potential), Intervening Lands, and Davis Technology Campus sites, and developed and proposed in-fill development in uncovered areas within the City.

Mitigation Measures

Short-term significant impacts related to development at Covell Center (Alternatives 2 through 5) will be reduced to no impact through compliance with existing or proposed City policies. For the other significant impacts described, the City has no current plan for providing 100% coverage of existing and proposed development areas. Given existing operational and financial constraints, no feasible mitigation measures are available. Therefore, impacts related to fire infrastructure would remain ***significant and unavoidable***.

Impact PS-4. Impacts on Existing School System

Significance Criterion

- A land use map alternative was determined to have a significant impact if development would require a substantive expansion of the existing school system that could not be mitigated by plan policies and/or state mandates.

Impacts of the proposed project related to school services were assessed with application of the above significance criteria. Under current state law, all development is assumed to have some impact on school facilities. State law also specifies that the collection of standardized fees (based on new dwelling units and square footage for non-residential uses) has been determined to be adequate mitigation for all school facility requirements. Based on these assumptions, this impact was assessed for the overall impact of each land use map alternative, and was not assessed for each

individual site being studied. Table 5C-16 provides an overview/comparison of the total enrollment of students for total population associated with the four land use map alternatives evaluated in this EIR. A more detailed discussion of each alternative is provided below.

Table 5C-16. Additional Housing Units and Students Generated under Each Land Use Map Alternative

Alternative 2	Alternative 3	Alternative 4	Alternative 5
+ 2,737 LD Units	+ 1,650 LD Units	+ 2,329 LD Units	+ 2,722 LD Units
+ 60 MD Units	+ 108 MD Units	+ 154 MD Units	+ 178 MD Units
+ 1,908 HD Units	+ 1,654 HD Units	+ 1,759 HD Units	+ 1,902 HD Units
+ 2,770 Students	+ 1,941 Students	+ 2,487 Students	+ 2,838 Students

Note: Number of additional students based on generation rates shown on Table 5C-6. Low Density and Medium Density residential was assumed to be single-family housing. Housing totals represent units within City limits.

Covers student generation in grades K through 12.

Housing designations: LD = Low Density MD = Medium Density HD = High Density

Alternative 2. Buildout to 2010 Using Existing General Plan. Development under this alternative would add 10,794 people to the service area population. Based on student generation rates provided by the DJUSD, anticipated development would increase the enrollment to an estimated 2,770 students. Policies (Policies 2.8A-C) in the General Plan require that adequate levels of school services be in place to accommodate new development.

Given the state limitations on school funding established under SB50/Proposition 1A, and the attendant prohibition against denying projects solely on the basis of insufficient school capacity, these General Plan policies may not be able to be fully implemented. However, SB 50/Proposition 1A provides that its level of funding is to be considered full mitigation of school impacts. Consequently, this impact is considered ***less than significant***.

Alternative 3. Reduced Buildout Scenario. Development under this alternative would add 7,645 people to the service area population. Based on student generation rates provided by the DJUSD, anticipated development would increase the enrollment to an estimated 1,941 students. The increase in demand for school service is subject to Policies Y&E 8.1 and 9.1 in the General Plan update which require mitigation of school impacts to the extent legally permissible.

Future school sites necessary to accommodate anticipated development will be identified jointly by the City and DJUSD under Action k of Policy Y&E 8.1. The proposed residential land use categories allow schools when compatible with the surroundings, so the identification of precise school sites on the land use map is not necessary.

Given the state limitations on school funding established under SB50/Proposition 1A, and the attendant prohibition against denying projects solely on the basis of insufficient school capacity, these General Plan policies may not be able to be fully implemented. However, SB 50/Proposition 1A provides that its level of funding is to be considered full mitigation of school impacts. Consequently, this impact is considered ***less than significant***.

Alternative 4. Community Expansion Scenario with Oeste Campus. Development under this alternative would add 9,666 people to the service area population. Based on student generation rates provided by the DJUSD, anticipated development would increase the enrollment to an estimated 2,487 students. The increase in demand for school service is subject to Policies Y&E 8.1 and 9.1 in the General Plan update that require mitigation of school impacts to the extent legally permissible. Future school sites necessary to accommodate anticipated development will be identified jointly by the City and DJUSD under Action k of Policy Y&E 8.1. The proposed residential land use categories allow schools when compatible with the surroundings, so the identification of precise school sites on the land use map is not necessary. As part of this General Plan update, the City and the DJUSD have worked together on assessing sites for the new junior high school (Signature site). This site is included under this alternative.

Given the state limitations on school funding established under SB50/Proposition 1A, and the attendant prohibition against denying projects solely on the basis of insufficient school capacity, these General Plan policies may not be able to be fully implemented. However, SB 50/Proposition 1A provides that its level of funding is to be considered full mitigation of school impacts. Consequently, this impact is considered ***less than significant***.

Alternative 5. Community Expansion Scenario with Davis Technology Campus. Development under this alternative would add 11,030 people to the service area population. Based on student generation rates provided by the DJUSD, anticipated development would increase the enrollment to an estimated 2,838 students. The increase in demand for school service is subject to Policies Y&E 8.1 and 9.1 in the General Plan update which require mitigation of school impacts to the extent legally permissible. Future school sites necessary to accommodate anticipated development will be identified jointly by the City and DJUSD under Action k of Policy Y&E 8.1. The proposed residential land use categories allow schools when compatible with the surroundings, so the identification of precise school sites on the land use map is not necessary. As part of this General Plan update, the City and the DJUSD have worked together on assessing sites for the new junior high school (Signature site). This site is included under this alternative.

An additional issue under this alternative would be the development of the Intervening Lands site for residential use. The site is somewhat isolated from the existing residential community, and the development proposed would not be large enough to site a new elementary school (nor would it be a good site for one based on environmental constraints). Although adverse, this impact would not be significant based on provisions of existing state law.

Given the state limitations on school funding established under SB50/Proposition 1A, and the attendant prohibition against denying projects solely on the basis of insufficient school capacity,

these General Plan policies may not be able to be fully implemented. However, SB 50/Proposition 1A provides that its level of funding is to be considered full mitigation of school impacts. Consequently, this impact is considered ***less than significant***.

Mitigation Measures

Since this impact is ***less than significant***, no mitigation is required.

Impact PS-5. Impacts on Library System

Significance Criteria

- A land use map alternative was determined to have a significant impact if development would require substantive expansion of the existing library system and such expansion cannot be provided through existing plans and/or general plan policies.

Impacts of the proposed project related to library services were assessed with application of the above significance criteria. The need for additional library services is measured using planning guidelines provided by Yolo County (the service provider for library services in the City). Since all land uses create some demand for library services, and since service standards are based on population ratios, this demand was assessed for the overall growth projected for each land use alternative, and was not assessed for each individual site being studied. Table 5C-17 provides an overview/comparison of the total volumes of material, number of full time employees, and needed building space associated with the four land use map alternatives evaluated in this EIR. A more detailed discussion of each alternative is provided below.

Table 5C-17. Additional Library Services/Facilities Demands under Each Land Use Map Alternative

Service Type	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Total volumes of material (at 2 volumes per capita)	+ 21,588	+ 15,290	+ 19,332	+ 22,060
Building space (one half square foot per capita)	+ 5,397	+ 3,823	+ 4,833	+ 5,515
Number of full-time employees per 2,500 people	+ 4	+ 3	+ 4	+ 4

Note: These numbers reflect the change from the total existing service ratios of 2 volumes of material per capita, 1 FTE per 2,500 people, and 0.5 square foot per capita building space.

Alternative 2. Buildout to 2010 Using Existing General Plan. Development under this alternative would add 10,794 people to the service area population. The library system's current standards are two volumes of material per capita, one-half square foot per capita of building space (the library is a 30,000-square-foot facility), and one full-time employee per 2,500 people. Anticipated development would increase total demand of material from 120,000 to 130,444, the number of full-time employees from 14.5 to 18.5, and would require 5,397 additional square feet of building space. Because the anticipated requirement for expansion of the library system will not be met by additional facilities, this impact is considered ***significant***.

Alternative 3. Reduced Buildout Scenario. Development under this alternative would add 7,645 people to the service area population. The library system's current standards are two volumes of material per capita, one-half square foot per capita of building space (the library is a 30,000-square-foot facility), and one full-time employee per 2,500 people. Anticipated development would increase total demand of material from 120,000 to 126,146, the number of full-time employees from 14.5 to 17.5, and would require 3,823 additional square feet of building space. Because the anticipated requirement for expansion of the library system will not be met by additional facilities, this impact is considered ***significant***.

Alternative 4. Community Expansion Scenario with Oeste Campus. Development under this alternative would add 9,666 people to the service area population. The library system's current standards are two volumes of material per capita, one-half square foot per capita of building space (the library is a 30,000-square-foot facility), and one full-time employee per 2,500 people. Anticipated development would increase total demand of material from 120,000 to 130,188, the number of full-time employees from 14.5 to 18.5, and would require 4,833 additional square feet of building space. Because the anticipated requirement for expansion of the library system will not be met by additional facilities, this impact is considered ***significant***.

Alternative 5. Community Expansion Scenario with Davis Technology Campus. Development under this alternative would add 11,030 people to the service area population. The library system's current standards are two volumes of material per capita, one-half square foot per capita of building space (the library is a 30,000-square-foot facility), and one full-time employee per 2,500 people. Anticipated development would increase total demand of material from 120,000 to 132,916, the number of full-time employees from 14.5 to 18.5, and would require 5,515 additional square feet of building space. Because the anticipated requirement for expansion of the library system will not be met by additional facilities, this impact is considered ***significant***.

Mitigation Measures

With implementation of the following mitigation measure, the impact on library services will be reduced to a ***less-than-significant*** impact.

PS-5.1. Implement Expansion Measures to Meet Library Standards (Alternatives 2 through 5)

The City shall add the following policy and action to the General Plan update.

*"**Policy A&C 1.5.** The City shall encourage the Yolo County to compensate for the increased demand in library space and materials by using various expansion techniques, including, but not limited to, book mobiles and satellite facilities.*

Actions

a. Encourage the private sector to fund library construction and book acquisition through corporate sponsorships and individual memberships."

Funding Source:	*City-sponsored change*
Implementing Party:	*City-sponsored change*
Monitoring Agency:	*Davis City Council*
Timing:	*Prior to adoption of General Plan update*

Impact PS-6. Impacts on Park and Recreation Facilities

Significance Criterion

- A land use map alternative was determined to have a significant impact if development would require substantive expansion of the existing park and recreation facilities that cannot be responded to by existing plans or General Plan policies.

Impacts of the proposed project related to parks and recreational facilities were assessed with application of the above significance criteria. The need for additional park and recreation facilities is measured using planning guidelines established by the City. Although the primary demand for park and recreation services are residential uses, all land uses create some demand. Since service standards are based on population ratios, this demand was assessed for the overall growth projected for each land use alternative, and was not assessed for each individual site being studied. Table 5C-18 provides an overview/comparison of the number of acres needed to maintain the City's standards for acre to population ratios associated with the four land use map alternatives evaluated in this EIR. A more detailed discussion of each alternative is provided below.

Table 5C-18. Additional Parkland Acreage Needed to Maintain City Standards under Each Land Use Map Alternative[1]

Park Type	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Community Parks	+ 19.4	+ 13.8	+ 17.4	+ 19.9
Neighborhood Parks	+ 19.4	+ 13.8	+ 17.4	+ 19.9
Mini-Parks	+ 2.2	+ 1.5	+ 1.9	+ 2.2
Other Parks	+ 13.0	+ 9.2	+ 11.6	+ 13.2

Note: These numbers reflect the change based on the City's parkland standards (acres per 1,000 population) of: 1.8 acres/1,000 for community parks, 1.8 acres/1,000 for neighborhood parks, 0.2 acres/1,000 for mini-parks, and 1.2 acres/1,000 for other parks.

[1] The acreage on this table is related only to the change in population from 1998. Table 5C-7 shows acreage needed to meet current standards.

Alternative 2. Buildout to 2010 Using Existing General Plan. Development under this alternative would add 10,794 people to the service area population. Table 5C-18 shows the park acreage that will be needed to support this increase in population. This demand is in addition to the acres currently needed to meet existing population park demands (Table 5C-7). The existing General Plan contains policies (Policies 3.4A-N) that require adequate levels of park and recreation facilities to accommodate new development. This is implemented through a requirement of parkland dedication or in-lieu funding in a ratio of 5 acres per 1,000 population on new development. Development of parkland comes from City funds, grants, and development requirements. In addition, the City Parks and Recreation Department's Facilities Master Plan guides park planning, acquisition, and development. The City is also currently planning on building several new park facilities, which total approximately 300 acres. Consequently, this impact is considered ***less than significant***.

Alternative 3. Reduced Buildout Scenario. Development under this alternative would add 7,645 people to the service area population. Table 5C-18 shows the park acreage that will be needed to support this increase in population. This demand is in addition to the acres currently needed to meet existing population park demands (Table 5C-7). The increase in demand for parks and recreation is subject to Policies POS 1.1 (comprehensive park planning), 3.1-3.3 (greenbelts as a component of the City's parks and open space system), 4.2 (construction of new parks), 6.1 (development and maintenance of parks), 6.2 (park and recreation exactions), and 7.1 (park planning) in the General Plan update.

Acquisition of parkland is implemented through a requirement of parkland dedication or in-lieu funding in a ratio of 5 acres per 1,000 population on new development. Development of parkland comes from City funds, grants, and development requirements. In addition, the City Parks and Recreation Department's Facilities Master Plan guides park planning, acquisition, and

development. The City is also currently planning on building several new park facilities, which total approximately 300 acres. Consequently, this impact is considered ***less than significant***.

Alternative 4. Community Expansion Scenario with Oeste Campus. Development under this alternative would add 9,666 people to the service area population. Table 5C-18 shows the park acreage that will be needed to support this increase in population. This demand is in addition to the acres currently needed to meet existing population park demands (Table 5C-7).

Impacts under this alternative are similar to those described under Alternative 3, and are considered to be ***less than significant***.

Alternative 5. Community Expansion Scenario with Davis Technology Campus. Development under this alternative would add 11,030 people to the service area population. Table 5C-18 shows the park acreage that will be needed to support this increase in population. This demand is in addition to the acres currently needed to meet existing population park demands (Table 5C-7).

Impacts under this alternative are similar to those described under Alternative 3, and are considered to be ***less than significant***.

Mitigation Measures

Since this impact is ***less than significant***, no mitigation is required.

Impact PS-7. Impacts on Water Supply and Distribution Facilities

Significance Criteria

- A land use map alternative was determined to have a significant impact if development would cause a substantive increased demand for domestic water supplies that cannot be responded to by existing plans or General Plan policies.
- A land use map alternative was determined to have a significant impact if development would require substantial expansion of domestic water distribution and storage facilities that cannot be responded to by existing plans or General Plan policies.

Impacts of the proposed project related to water supply and distribution were assessed with application of the above significance criteria. Table 5C-19 provides an overview/comparison of total

service connections and total water distributed per year associated with the four land use map alternatives evaluated in this EIR. A more detailed discussion of each alternative is provided below.

Table 5C-19. Water Supply and Distribution Impacts under Each Land Use Map Alternative

Service Type	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Additional service connections	+ 2,329	+ 1,612	+ 2,072	+ 1,663
Distribution (AFY)	+ 1,807	+ 1,189	+ 1,585	+ 1,853
	• Service is within the planned capacity of the City's water system.	• Service is within the planned capacity of the City's water system.	• Water supplies are adequate to meet needs. • Distribution system not planned for this expansion.	• Water supplies are adequate to meet needs. • Distribution system not planned for this expansion.

Note: Numbers were calculated using a per capita rate based on existing service connections of 12,530, total water distribution of 11,000 AF per year, and a total existing population of 54,428 (City of Davis).

Alternative 2. Buildout to 2010 Using Existing General Plan. Development under this alternative would add 10,794 people to the service area population. Based on existing levels of service, (12,530 connections that provide service to approximately 55,000 customers at a total of 11,000 acre-feet per year [AFY] distributed), the anticipated development would require 2,329 additional service connections and a total distribution of 12,807 AF per year. Policies (Policies 6.4A-M) in the existing General Plan require that adequate levels of water supply distribution are in place to accommodate new development. Although demand for water supply would increase, the City has determined that this increase is within the capabilities of the system. On a system-wide basis, the City is implementing extensive water conservation measures, which are expected to reduce consumption by 12.5%. Regarding distribution and storage facilities, the City's capital improvements have been designed to meet the needs projected in the existing General Plan. This land use alternative continues that level of development, and the increase in connections required was determined to be consistent with existing plans, and therefore is considered ***less than significant***.

Alternative 3. Reduced Buildout Scenario. Development under this alternative would add 10,794 people to the service area population. Based on existing levels of service (described under Alternative 3), the anticipated development under this alternative would require 1,612 additional service connections and a total distribution of 12,189 AF per year. Policy WATER 1.3 in the General Plan update requires that adequate levels of water supply and distribution are in place to accommodate new development. In addition, although total demand for water supply is anticipated to increase, this increase is below the level used in planning future water demand and

facilities (current plans based on buildout of the existing General Plan). On a system-wide basis, the City is also implementing extensive water conservation measures, which are expected to reduce consumption by 12.5%. Regarding distribution and storage facilities, the City's capital improvements have been designed to meet the needs projected in the existing General Plan. This land use alternative continues that level of development, and the increase in connections required was determined to be consistent with existing plans, and therefore is considered ***less than significant***.

Alternative 4. Community Expansion Scenario with Oeste Campus. Development under this alternative would add 9,666 people to the service area population. Based on existing levels of service (described under Alternative 3), the anticipated development would require 2,072 additional service connections and a total distribution of 12,585 AF per year. Policy WATER 1.3 in the General Plan update requires that adequate levels of water supply distribution are in place to accommodate new development. In addition, although total demand for water supply is anticipated to increase, the City's extensive water conservation measures, which are included in Policies WATER 1.1 (prioritize demand reduction and conservation) and 1.2 (require water conserving landscaping), would serve to reduce overall consumption by 12.5 percent below current levels.

Although the City could obtain the water supplies needed to serve this project, the City's water infrastructure has not been designed to handle growth above the levels projected in the existing General Plan. The City's Public Works Department has found that portions of the distribution system will be near capacity at buildout of the existing General Plan, and that additional large development may overtax the system in some locations. Since the capacity issues are located within the City (i.e., not just at a project site), development at sites being studied that were not forecasted in the existing General Plan (Sutter-Davis, Oeste Campus) may cause capacity issues that cannot be feasibly mitigated by a specific project. Additional project specific engineering assessment will need to be done once a specific project is submitted to determine if the lines serving a site have adequate capacity and determine a course of mitigation. Consequently, this impact is considered ***significant and unavoidable.***

Development of the Signature site for establishment of a new junior high school was not determined to have a significant impact since the students at this school do not create a new demand (they are assumed to be from planned residential development that was already accounted for in system planning).

Alternative 5. Community Expansion Scenario with Davis Technology Campus. Development under this alternative would add 11,030 people to the service area population. Based on existing levels of service (described under Alternative 3), the anticipated development would require 1,663 additional service connections and a total distribution of 12,853 AF per year. Policy WATER 1.3 in the General Plan update requires that adequate levels of water supply distribution are in place to accommodate new development. In addition, although total demand for water supply is anticipated to increase, the City's extensive water conservation measures, which are included in Policies WATER 1.1 (prioritize demand reduction and conservation) and 1.2

(require water conserving landscaping), would serve to reduce overall consumption by 12.5 percent below current levels.

The impacts on system capacity are similar to Alternative 4, except that the sites not planned for include Sutter-Davis, Davis Technology Campus, and Intervening Lands sites. Since the capacity issues are located within the City (i.e., not just at a project site), development at these sites may cause capacity issues that cannot be feasibly mitigated by a specific project. Additional project specific engineering assessment will need to be done once a specific project is submitted to determine if the lines serving a site have adequate capacity and determine a course of mitigation. Consequently, this impact is considered ***significant and unavoidable.***

Mitigation Measures

Mitigation measure PS-7.1 requires future site specific studies prior to review and approval of projects at the Sutter-Davis, Oeste Campus, Davis Technology Campus, or Intervening Lands sites to determine specific system capabilities to serve the projects proposed. Since the ability to mitigate these impacts can not be projected pending an engineering study (based on project specific demands), this impact was determined to remain ***significant and unavoidable***.

PS-7.1. Engineering Feasibility Study (Alternatives 4 and 5)

Prior to project review and approval of projects on the Sutter-Davis, Oeste Campus, Davis Technology Campus, or Intervening Lands sites, the project proponent shall submit a detailed engineering assessment of the project's water demand and sewer/wastewater production, and an assessment of the City's infrastructure system to handle the project in question. The project proponent shall be required to provide mitigation to offset impacts on the water system as determined by the City.

If Mitigation Measure LU-1.1 is adopted, this analysis shall be prepared as part of the specific plan for the Davis Technology Campus/Intervening Lands specific plan.

Funding Source:	*Project proponent*
Implementing Party:	*Project proponent*
Monitoring Agency:	*City of Davis Planning and Building Department*
Timing:	*Prior to project approval*

Impact PS-8. Impacts on Sewer Mains and Capacity, and Expansion of Treatment Facilities

Significance Criterion

- The proposed project was determined to have a significant impact if development would require the substantive extension of sewer mains and capacity, and expansion of treatment facilities that cannot be responded to by existing plans or General Plan policies.

Impacts of the proposed project related to sewage and wastewater services were assessed with application of the above significance criteria. Table 5C-20 provides an overview/comparison of the sewage and wastewater generation associated with the four land use map alternatives evaluated in this EIR. A more detailed discussion of each alternative is provided below.

Table 5C-20. Additional Sewage and Wastewater Generation under Each Land Use Map Alternative

	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Generation (MGD)	0.97	0.69	0.87	0.99

Note: These numbers reflect a generation rate of 90 gallons per capita per day and the estimated 1998 generation of 4.8 MGD based on the 1998 population of 54,428 provided by the City of Davis.

Alternative 2. Buildout to 2010 Using Existing General Plan. Development under this alternative would add 10,794 people to the service area population. Based on the current generation rate of 90 gallons per day (GPD) of sewage and wastewater at an estimated population of 54,428, the anticipated development would increase sewage and wastewater generation to 5.77 MGD. The current capacity of the wastewater treatment plant is 7.5 MGD and is expected to meet the demands of development projected through development under the existing General Plan. Recent rehabilitation projects on sewer mains and wastewater infrastructure were done to accommodate capacity increases through the planned buildout of the existing General Plan. (Weir pers. comm.) Since facilities have been planned and sized to meet the development potential under this alternative, this alternative's impact is considered ***less than significant***.

Alternative 3. Reduced Buildout Scenario. Development under this alternative would add 7,645 people to the service area population. Based on the current generation rate of 90 GPD of sewage and wastewater at an estimated population of 54,428, the anticipated development would increase sewage and wastewater generation to 5.49 MGD. The current capacity of the wastewater treatment plant is 7.5 MGD and is expected to meet demands through 2010. Recent rehabilitation projects on sewer mains and wastewater infrastructure were done to accommodate

capacity increases through the development planned under the existing General Plan (Weir pers. comm.). Since development under this alternative would be lower, this impact is considered ***less than significant***.

Alternative 4. Community Expansion Scenario with Oeste Campus. Development under this alternative would add 9,666 people to the service area population. Based on the current generation rate of 90 GPD of sewage and wastewater at an estimated population of 54,428, the anticipated development would increase sewage and wastewater generation to 5.67 MGD. Additional capacity would be available in the treatment plant under this scenario. However, similar to the situation described under Impact PS-7, the City's Public Works Department has found that portions of the collection system will be near capacity at buildout of the existing General Plan, and that additional large development may overtax the system in some locations. Since the capacity issues are located within the City (i.e., not just at a project site), development at sites being studied that were not forecasted in the existing General Plan (Sutter-Davis, Oeste Campus) may cause capacity issues that cannot be feasibly mitigated by a specific project. Additional project specific engineering assessment will need to be done once a specific project is submitted to determine if the lines serving a site have adequate capacity and determine a course of mitigation. Consequently, this impact is considered ***significant and unavoidable.***

Development of the Signature site for establishment of a new junior high school was not determined to have a significant impact since the students at this school do not create a new demand (they are assumed to be from planned residential development that was already accounted for in system planning).

Alternative 5. Community Expansion Scenario with Davis Technology Campus. Development under this alternative would add 11,030 people to the service area population. Based on the current generation rate of 90 gallons per day (GPD) of sewage and wastewater at an estimated population of 54,428, the anticipated development would increase sewage and wastewater generation to 5.79 MGD. Additional capacity would be available in the treatment plant under this scenario.

The impacts on system capacity are similar to Alternative 4, except that the sites not planned for include Sutter-Davis, Davis Technology Campus, and Intervening Lands sites. Since the capacity issues are located within the City (i.e., not just at a project site), development at these sites may cause capacity issues that cannot be feasibly mitigated by a specific project. Additional project specific engineering assessment will need to be done once a specific project is submitted to determine if the lines serving a site have adequate capacity and determine a course of mitigation. Consequently, this impact is considered ***significant and unavoidable.***

Mitigation Measures

Mitigation measure PS-7.1 requires future site specific studies prior to review and approval of projects at the Sutter-Davis, Oeste Campus, Davis Technology Campus, or Intervening Lands

sites to determine specific system capabilities to serve the projects proposed. Since the ability to mitigate these impacts can not be projected pending an engineering study (based on project specific demands), this impact was determined to remain ***significant and unavoidable***.

PS-7.1. Engineering Feasibility Study (Alternatives 4 and 5)

PS-8.1. Require Expansions of Sewer Infrastructure to Pay For Improvements (Alternatives 4 and 5)

Add the following goal, policy statements, and action item to Chapter 6, Water, in the General Plan.
"WASTEWATER

GOAL WATER 5. *Remain within the capacity of the City wastewater treatment plant.*

Policy WATER 5.1 *Evaluate the wastewater production of new large scale development prior to approval to ensure that it will fall within the capacity of the plant.*

Policy WATER 5.2 *Provided that the existing plant capacity is not exceeded, require new large scale development to pay its fair share of the cost of extending sewer service to the site.*

Action.

a. *Require new large scale development to include a funding mechanism for the installation and maintenance of sewer service to the site."*

Funding Source:	*City-sponsored change*
Implementing Party:	*City-sponsored change*
Monitoring Agency:	*Davis City Council*
Timing:	*Prior to adoption of General Plan update*

Impact PS-9. Impacts on Solid Waste Landfill Capacity

Significance Criterion

- The proposed project was determined to have a significant impact if development would produce substantive solid waste increases in excess of landfill that cannot be responded to by existing plans or General Plan policies.

Impacts of the proposed project related to solid waste services were assessed with application of the above significance criteria. Solid waste generation for each land use alternative is measured using a factor based on population (current solid waste generation divided by current population). Using this approach, impacts were assessed using overall population growth projected under each land use alternative, and were not assessed for each individual site being studied. Table 5C-21 provides an overview/comparison of the solid waste generation rate needed associated with the four land use map alternatives evaluated in this EIR. A more detailed discussion of each alternative is provided below.

Table 5C-21. Solid Waste Generation Rates under Each Land Use Map Alternative

	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Generation (pounds per day)				
Incremental Increase	+ 33,677	+ 23,852	+ 30,158	+ 34,414
Total Generation	203,492	193,677	199,973	204,228

Note: These numbers reflect the change from the total existing generation rate of 3.12 pounds per person per day and the total existing population of 54,428 provided by the City of Davis.

Alternative 2. Buildout to 2010 Using Existing General Plan. Development under this alternative would add 10,794 people to the service area population. Based on current generation rates of 3.12 pounds per person per day (at an estimated population of 54,428 and total pounds per day at 169,815), the anticipated development would increase solid waste generation to 203,492 total pounds per day. However, policies (Policies 6.5A-U) in the General Plan require that Citywide recycling and other energy conservation measures be implemented. The 2010 population projected under this scenario is similar to that projected by SACOG for the year 2010 (65,000 people) and so is within the planned capacity of the Yolo County land fill. Consequently, this impact is considered ***less than significant***.

Alternative 3. Reduced Buildout Scenario. Development under this alternative would add 7,645 people to the service area population. Based on current generation rates of 3.12 pounds per person per day (at an estimated population of 54,428 and total pounds per day at 169,815), the anticipated development would increase solid waste generation to 193,677 total pounds per day. However, the City proposes Policy MAT 1.1 and related Actions c and h which provide for recycling and the reduction of yard waste. . In addition, the 2010 population projected under this scenario is less than that projected by SACOG for the year 2010 (65,000 people) and so is within the planned capacity of the Yolo County land fill. Consequently, this impact is considered ***less than significant***.

Alternative 4. Community Expansion Scenario with Oeste Campus. Development under this alternative would add 9,666 people to the service area population. Based on current generation rates of 3.12 pounds per person per day (at an estimated population of 54,428

and total pounds per day at 169,815), the anticipated development would increase solid waste generation to 199,973 total pounds per day. However, the City proposes Policy MAT 1.1 and related Actions c and h which provide for recycling and the reduction of yard waste. . The 2010 population projected under this scenario is similar to that projected by SACOG for the year 2010 (65,000 people) and so is within the planned capacity of the Yolo County land fill. Consequently, this impact is considered ***less than significant***.

Alternative 5. Community Expansion Scenario with Davis Technology Campus. Development under this alternative would add 11,030 people to the service area population. Based on current generation rates of 3.12 pounds per person per day (at an estimated population of 54,428 and total pounds per day at 169,815), the anticipated development would increase solid waste generation to 204,228 total pounds per day. However, the City proposes Policy MAT 1.1 and related Actions c and h which provide for recycling and the reduction of yard waste. The 2010 population projected under this scenario (65,458) is similar to that projected by SACOG for the year 2010 (65,000 people) and so is within the planned capacity of the Yolo County land fill. Consequently, this impact is considered ***less than significant***.

Mitigation Measures

Since this impact is ***less than significant***, no mitigation is required.

THIS PAGE INTENTIONALLY LEFT BLANK