

NEW LANGUAGE = BLUE

ADOPTED LANGUAGE =
GREEN

INTRODUCTION

INTRODUCTION

i. WHAT IS THE GENERAL PLAN?

The Merced County Year 2000 General Plan contains the principle statement concerning the County's goals and desires concerning land use and is designed to serve as the basis for development decision making. This Plan is thus the local "constitution" for physical development and, as a long-range planning document, it will direct the physical growth and development of the County through the Year 2000.

When the County adopted its first General Plan in 1965, State law only required such plans to contain "guidelines" for future growth. The County's Zoning Ordinance was the primary means to regulate land use and development. In 1970 and 1971, State law was changed to require a comprehensive treatment of development issues. In response, the County adopted several new mandated general plan elements addressing specific development issues: Housing, Seismic Safety, Noise, Scenic Routes, Safety and Conservation/Open Space. The new legislation also required that zoning and subdivision approval be consistent with the General Plan; thereby elevating the plan from mere academic study to the fundamental land use charter for local land use decision making.

This Year 2000 General Plan constitutes the first comprehensive review and update by the County of all mandated elements into one internally consistent General Plan document. It was prepared by the Merced County Planning Department with the assistance of three consultants who provided technical support on noise, circulation and wildlife issues. The primary focus of this Plan revision was to incorporate up-to-date information and research to meet all the State general plan requirements.

As this document represents primarily a technical update from the previous plan, the fundamental land use and development policy direction for the County has not been substantially altered from preexisting policy.

ii. HOW TO READ AND USE THE PLAN

The Merced County Year 2000 General Plan is oriented to provide a statement of goals, objectives and policies for County decision making on development issues over the next 10 years. It contains projection and addresses policy considerations based on this long-term time frame.

As a comprehensive document, it addresses all of the State mandated issues as well as those non-mandated issues important and unique to Merced County.

The Plan combines the specific requirements for individual elements" contained in Government Code Section 65302 into various Chapters, which focus on specific general plan issue areas.

The Government Code provisions are often repetitive, requiring different elements to address the same topic areas. By using one general plan document to address all mandated issues, this overlap has been avoided.

The chapters in this General Plan correspond closely to the individual elements required in the Government Code; however, they are not separate documents or elements of the plan, but instead are an interrelated presentation of issues, goals, objectives and policies of the County, which together form the basis of County planning activities.

Format of the Year 2000 Plan

In order for the reader to obtain the most value out of this Plan, a format has been used which provides a linkage between the issue discussion on a given topic and the policy direction adopted to guide decision making.

After a brief introduction and purpose section, each chapter details various issues relevant to the particular topic area of the chapter and presents findings used for policy development. The Chapters conclude with a complete list of goals, objectives, policies and implementation measures which the County has adopted to guide development decision making. The typical format of each chapter is as follows:

- Introduction/Purpose
- Policy Issues
- Discussion
- Findings
- Goals, Objectives, Policies and Implementation

Two of the Chapters also contain "Action Plans" which the State mandates for the Housing and Open Space Chapters. It is the policies and how they are implemented which most clearly guides decision making for development within the County. By reviewing the policy statements and their implementation, the reader can identify how issues raised in each Chapter are to be dealt with by the County.

Several Chapters include an "Appendix" section, which may provide more detailed data or support information. A General Plan Technical Appendix was also prepared which includes those Technical Study Papers prepared by consultants: a traffic study, noise attenuation measures, and a wildlife resource inventory. This Technical Appendix is available under separate cover.

MERCED COUNTY PLANNING COMMISSION
FIGURE 1

There is an additional component of the Merced County General Plan involving more focused area plans for the largest unincorporated communities. These documents, called "Community Specific Plans," detail local development, land Use and infrastructure issues and provide policy direction on a community level. Currently, there are seven plans which were adopted between 1981 and 1984 covering communities with public sewer and water systems: Delhi, Franklin/Beachwood, Hilmar, Le Grand, Planada, Santa Nella and Winton. As components of the General Plan, Community Specific Plans are consistent with overall County policy, but provide a more detailed local focus than appropriate in the Countywide document.

iii. EXECUTIVE SUMMARIES OF EACH GENERAL PLAN CHAPTER

LAND USE CHAPTER

Purpose and Content

The purpose of the Land Use Chapter is to identify appropriate land uses for all unincorporated areas of the County, recognizing a balance between human needs and natural and environmental limitations. This Chapter designates and describes the general category of use for all lands and includes recommended standards of population density and building intensity. The Land Use Policy diagram and the individual urban center maps designate the specific land use classifications for all property.

Consistent with past General Plan policy, the Land Use Chapter is oriented to an "urban centered concept" which directs future urban land use activities to established urban areas where services are available and impacts on agricultural and other natural and open space resources can be minimize. The Chapter recognizes two primary categories of land use--urban and rural--and presents a discussion on urban boundaries and land use designations, and rural land use characteristics and values. A discussion of special land uses and land use issues is also presented to address items including public facilities, hazardous and non-hazardous waste, flood hazards and airports.

List of Land Use Chapter Goals

1. A land use pattern which enhances the integrity of both urban and rural areas.
2. A high quality living environment within unincorporated communities.
3. Coordinated, orderly development in city fringe areas.

4. Sufficient opportunity provided for satisfying the demand for a semi-rural living environment.
5. Sufficient opportunity to accommodate the specialized needs of the traveling public balanced with circulation and other County needs.
6. The daily commercial and service needs of rural populations are served by Agricultural Services Centers (ASCs).
7. Conservation of productive agricultural and other valuable open space lands.
8. A rural environment which achieves a balance between its agricultural and other open space resource values.
9. Accommodation of public land uses and private facilities which states~specific County needs.
10. County services and facilities provided at adequate levels for existing and future residents.
11. Accommodate the tenth University of California Campus and orderly development of adjacent land uses through a comprehensive planning process.
12. Long-term economic and social benefits, such as employment, are maximized through the reuse of Castle Air Force Base.

CIRCULATION CHAPTER

Purpose and Content

The purpose of the Circulation Chapter is to provide a plan for an infrastructure system designed to accommodate the anticipated land use activities throughout the County. The Chapter identifies important issues related to automobile transportation including: designating roads into categories based on their traffic characteristics for proper right-of-way acquisition and design; road construction and maintenance problems; and individual property access considerations. Additional transportation topics include public transportation systems and alternative modes of travel including air, rail, and bicycle and pedestrian routes. In addition, other infrastructure systems are identified including power transmission and distribution systems, irrigation water distribution and urban water, sewer and drainage Systems. The Countywide Circulation diagram, together with individual urban boundary maps, contain the classification for all major County and State thoroughfares.

List of Circulation Chapter Goals

1. A road system, which provides free movement of vehicles throughout the County.
2. A Circulation system, which provides for a variety of transportation modes and for the safe and efficient movement of people and goods throughout the County.
3. An adequate system for the transmission and distribution of energy, water and information.
4. Adequate water, sewer and drainage are provided to meet urban needs of the County.

HOUSING CHAPTER

Purpose and Content

The Housing Chapter provides a guide to the development of decent, suitable and affordable housing for the citizens of Merced County from 1992 to 1997 in partial fulfillment of the Statewide Housing Goal. It represents the responsibility of the County in a cooperative effort with the public and private sector, to expand housing opportunities, facilitate housing improvements and development, and accommodate the housing needs of Merced County.

The content of the Chapter includes a assessment of existing housing needs among various segments of the population, a determination of prospective housing needs, an identification of "quantified objectives" for the supply of housing over the five year time frame of the Chapter and an "Action Plan", promoting measures to achieve the low-income housing objectives. Additional topics include market and government constraints to housing development, and energy conservation measures to reduce energy costs.

List of Housing Chapter Goals

1. Concentrate future housing development and redevelopment in established urbanized communities, [approved master planned communities](#), and designated Rural Residential Centers where public services already exist [or will be provided with Community development](#).
2. Revitalize existing neighborhoods and communities, thereby reinforcing and maximizing public investment in services delivery systems and enhancing economic stability.
3. Provide a mixture of residential uses including high density in urbanized communities and low density in Rural Residential Centers.

4. Conserve and protect agricultural lands to ensure continued productivity and long-term stability of agricultural activities.
5. Provide adequate housing at reasonable cost to all residents regardless of income, age, sex, religion or ethnic background.

NOISE CHAPTER

Purpose and Content

The purposes of the Noise Chapter are to provide mechanisms to reduce and/or eliminate existing conflicts between land Use and noise and also to minimize the creation of such conflicts in future land Use decisions. As the component of the General Plan most closely associated with noise issues, this Chapter is oriented to provide policy direction for the County to recognize noise conflicts when making land use decisions.

The Chapter presents an inventory of the existing noise environment of the County by source, including roadways and railways, airports, industrial and other major sources. This noise environment is expressed by noise contours. It also includes a community survey conducted to identify the level of noise exposure to specified noise sensitive land uses throughout the County. In recognition of noise exposure and land use compatibility criteria, policies are presented to avoid future conflicts from incompatible land uses and reduce future exposure in the existing noise impacted areas.

List of Noise Chapter Goals

1. All citizens of the County free from excessive noise.
2. Noise generating land uses and facilities important to the economic health of the County, are not adversely affected by the encroachment of incompatible noise sensitive land uses.

SAFETY CHAPTER

Purpose and Content

The purpose of the Safety chapter is to identify the various hazards impacting the County and to provide policies for the protection of County residents and properties from unreasonable risks associated with these hazards. The Chapter discusses the major natural and man-made hazards within the County including: seismic activity and related impacts; slope and landslide hazards; ground subsidence and related geologic hazards; flood plains and flooding problems;

urban and wildland fires; and emergency evacuation routes. Goals and policies are identified to protect County residents from these hazards. A central theme of this Chapter is to recognize the use of rural land use designations to limit urban development in identified hazards areas.

List of Safety Chapter Goals

1. Merced County residents protected from known seismic and geologic hazards.
2. Merced County residents free from unacceptable risks resulting from dam failure.
3. Merced County residents free from personal injury and property damage resulting from unstable soils.
4. Merced County residents and structures protected from harmful effects of flooding.
5. The risk of injury and property damage resulting wildland and urban fires is minimized.

OPEN SPACE/CONSERVATION CHAPTER

Purpose and Content

The purpose of the Open Space/Conservation Chapter is to provide a plan to carefully manage open space resources in order to support the County's anticipated population growth while preserving non-renewable assets for future generations. The Chapter provides an inventory of the open space resources of the County and details issues and policies related to their conservation and preservation. This Chapter is oriented to provide a balance among a" Chapters of the General Plan recognizing competing uses of land for urban and rural activities and the value of open space for: natural resource preservation; the managed production of resources; outdoor recreational uses; and public health and safety.

The content of the Chapter includes discussion and policies related to the following issues: natural vegetation, wetland and wildlife resources; soil and mineral resources; historical and archaeological values; water quality, quantity and watersheds; natural and man-made hazards; visual and recreational values; energy resources; and air quality.

List of Open Space/Conservation Chapter Goals

1. Habitats which support rare or endangered species are not substantially degraded.
2. Soil, water, air, mineral, energy and historical resources are properly managed.

3. Open space for recreation, aesthetics and protection from hazards.

AGRICULTURAL CHAPTER

Purpose and Content

The Agricultural Chapter is an effort by the County to analyze the status of agriculture and to enact policies that will improve the viability of agricultural operations and promote the conservation of agricultural land. The agricultural resources of the County are discussed through a variety of topic areas including: the economics of agriculture and its benefit to the County economy; the soil resources of the County; conversion of agricultural land; analysis of land parcelization; agricultural related support and processing services; and the importance of water issues including irrigation, flooding and drainage problems. The Chapter relies on the "urban centered concept" developed in the Land Use Chapter for the clear identification of urban areas in order to promote the conservation of agricultural lands and reduce urban and rural land Use conflicts.

List of Agricultural chapter Goals

1. The financial viability of the agricultural sector is improved.
2. Productive agricultural lands are conserved.
3. Land uses which are potentially disruptive to the agricultural economy are properly located and operated.
4. The management of water resources to benefit the agricultural community is improved.

LAND USE

A. INTRODUCTION AND PURPOSE**1. Government Codes and Provisions**

Based on the requirements contained in the California Government Code, the Land Use Element has the broadest scope of all General Plan elements and its mandated contents usually overlap with other sections of the General Plan. The main land use requirement of the Government Code is to designate:

. . . the proposed general distribution and general location and extent of the uses of the land for housing, business, industry, open space including agriculture, recreation and enjoyment of scenic beauty, education, public buildings and grounds, solid and liquid waste facilities and other categories of public and private use of the land. (Government Code Section 65302 (a))

This Chapter, as the portion of the Merced County General Plan primarily oriented to these Government Code provisions, identifies specific designations for use of the land within the unincorporated portions of the County. Detailed standards or requirements for development are contained in various County ordinances and codes, most notably the Zoning and Subdivision Codes. The Land Use Chapter outlines the general category of use for all lands, including standards for building intensities and population densities. The zoning designations must be made consistent with these standards as a means to implement the Plan. In addition, almost all discretionary land use applications reviewed by the County, must be found consistent with the General Plan prior to approval.

2. Purpose of the Land Use Chapter

As a legislative action by the Board of Supervisors, the adopted Land Use Chapter provides the central policy context on which to base all land use decision making within the County. Rather than describe actual development within the County, this chapter addresses the intended or desired use of the land. The central purpose of this chapter is to identify appropriate land uses for all unincorporated areas recognizing a balance between human needs and natural and environmental limitations. The General Plan designates the highest and best use of land from a community and Countywide perspective. This is best accomplished through careful consideration of various issues when categorizing land for specific uses and by reviewing actual development proposals. These issues, which are central to this chapter and to the entire General Plan, include appropriate density and intensity of use, compatibility between adjacent uses, assessment of impacts resulting from an

activity, the consistency with the long-term County goals and objectives, and related environmental considerations.

It is through development of Land Use Chapter policies and their careful implementation that the future of Merced County can be shaped. The intent of this document is to create a land use pattern achieving a balance among all needs of the County.

B. LAND USE CHAPTER ISSUES

1. Trends and Projections

A recognition of recent trends and realistic assumptions for making projections about the future is vital for the Land Use Chapter given its focus to designate areas for "proposed" land uses. While it is extremely difficult to make projections for future population and employment growth and development activity with any accuracy, the primary importance of this effort is to ensure that there is an adequate supply of land designated in the County to accommodate needed housing which is balanced with the need for employment, recreational and other opportunities, and that development of these areas does not overload the capacities of public infrastructure and services or significantly impact the natural environment.

The technique used in this document to project population growth is based on recognition of the historical 17-year growth between 1970 and 1987, for each major unincorporated community and city. Based on assumptions concerning regional growth differences and community trends, these averages were adjusted to project a year 2000 population level for each community and the rural area of the County. The total year 2000 population of 238,209 was obtained from projections provided by the State Department of Finance. Based on a comparison with historic numbers, these figures represent an increased anticipated growth rate for cities in the northern and western part of the County due to pressures for growth from adjacent counties and people employed in the Bay area. The projections are presented in Table I-1.

Projections for wage and salary employment to the year 2000 have also been completed and are presented in Table I-2. This table reflects generally a continuation of past trends with slight adjustment for total employment and agricultural employment. Overall, employment is projected to grow at approximately a 2 percent average to the year 2000. This table can be used as a

TABLE I-1

PROJECTED MERCED COUNTY POPULATION GROWTH

<u>Unincorporated Communities</u>	1970 Population	1987 Population	Projected Avg. Annual % Growth Rate 1987-2000	1987-2000 Projected Pop. Growth	Projected YR. 2000 Population
Delhi	2,063	2,980	2.0	1,031	4,011
Franklin/Beachwood	2,079	2,659	1.9	657	3,316
Hilmar	1,110	2,441	5.0	1,586	4,027
Le Grand	1,026	1,130	.8	117	1,247
Midway	430	735	3.7	354	1,089
Planada	2,056	2,583	.8	269	2,852
Santa Nella	182	561	5.7	416	977
S. Dos Palos	642	789	3.7	380	1,169
Snelling	218	326	3.0	127	453
Winton	3,393	5,846	3.8	2,887	8,733
RRC's	2,073	3,997	4.4	2,286	6,283
Remainder of Uninc. County	37,982	44,919	1.4	8,376	53,295
Totals	53,254	68,966		18,486	87,452
Incorporated Cities					
Atwater	11,640	21,231	3.5	9,800	31,031
Dos Palos	2,496	4,260	3.0	1,661	5,921
Gustine	2,793	3,655	4.0	1,913	5,568
Livingston	2,588	6,660	4.0	3,523	10,183
Los Banos	9,188	12,795	4.5	7,553	20,348
Merced	22,670	48,837	4.5	28,869	77,706
Totals	51,375	97,438		53,319	150,757
Grand Totals	104,629	166,404		71,805	238,209

TABLE I-2

WAGE AND SALARY EMPLOYMENT PROJECTIONS

Year	<u>ACTUAL</u> ^A							
	1980	1981	1982	1983	1984	1985	1986	1987
AG.	10,800	10,825	10,925	10,150	10,375	10,100	9,550	9,725
INDUS. ^D	12,000	11,875	12,000	12,275	13,750	14,475	14,800	14,550
COMM. ^E	14,175	14,200	14,675	14,675	15,275	15,625	16,550	17,500
TOTAL ^F	46,350	46,400	47,275	47,250	49,575	50,775	51,900	52,900

Year	<u>FORECAST</u> ^B		<u>PROJECTION</u> ^C		
	1988	1989	1990	2000	% Annual Increase
AG.	9,800	9,925	9,975	10,475	0.5
INDUS. ^D	14,800	15,100	15,525	20,475	2.8
COMM. ^E	17,725	18,025	18,575	24,975	3.0
TOTAL ^F	53,550	54,375	55,475	74,550	2.0

A --- Actual employment 1980-1987 from EDD Annual Planning Info, May 1988, Table B.

B --- Forecast for 1988-89 from EDD Annual Planning Info, May 1988, Page 8.

C --- Projection generated by Planning Department based on straight line increase at same rate as 1980-89 actual and forecast period by EDD for each employment group. Adjustments to the actual rates were made for the total employment group to a 2% annual rate which reflects 1980-87 actual growth, and the agricultural sector was adjusted to reflect an increase rather than the actual 0.9% annual decline experienced. See narrative for explanation of projections by employment group.

D --- Industrial includes the following EDD categories: Construction and mining; manufacturing; transportation and public utilities; and wholesale trade.

E --- Commercial includes the following EDD categories; retail trade; finance; insurance and real estate; and services.

F --- Total includes all categories shown and a "Governmental" category which is excluded from the detail.

general comparison with commercial and industrial land use classifications in the County to validate whether an adequate amount of land is designated to accommodate expected employment growth. Similarly, the residential designated land can be compared to the population forecast to determine adequacy. It should be noted that these tables are intended only for a general comparison between land use needs and availability. They were also used in the Circulation Chapter for correlating projected land use with circulation capacity to the year 2000. The figures are not intended to be used as a test for reserve capacity of the various land use designations within communities or on applying the conversion criteria for proposals to redesignate land from rural to urban land uses.

The Housing Chapter of this General Plan also contains projections for housing need and employment, but only to the year 1990 (See Table III-12 and Figure III-1 in the Housing Chapter). While a similar method was used in that chapter, the base period reflected earlier trends and the purpose of the projections was different--allocating housing needs based on a total unincorporated County figure provided by the Merced County Association of Governments (MCAG). The Housing Chapter must be revised by July 1992 under provisions of the Government Code. Updated projections will be incorporated into the General Plan before that deadline with the benefit of 1990 census data.

2. Boundary Discussions

It has been the central policy of the Land Use Chapter since the last comprehensive revision in 1978, to direct urban development to designated urban centers in order to avoid the urbanization or "intensification" of rural areas. This concept resulted in the creation of several types of urban boundary designations. After a summary of this basic concept, this section will present a discussion of the character and purpose of these various boundaries.

a. The Urban Centered Concept

The "Urban Centered Concept" has been the basic principle of land use policy in the County for the past ten years and continues as the direction for this year 2000 plan. The urban centered concept is directed at utilizing cities and unincorporated communities or centers to accomplish anticipated urban expansion in an orderly manner, based on the ability of these communities to furnish public services along with land needs based on population demands and in balance with employment-generating land uses. The term, "Urban," is used to describe land uses common to a city or unincorporated community. Urban land uses include: residential, commercial, industrial and related institutional uses. Home sites of one acre or larger found in Rural Residential Centers are also considered urban. These urban uses are generally more "intensive" in character than rural land uses.

The purpose of using the urban centered concept to plan land use is to ensure that:

- Growth occurs in an orderly and logical manner;
- Land is utilized efficiently;
- Agricultural operations are not eliminated prematurely;
- The County's planning efforts are complementary to those of the cities;
and
- Urban development occurs where proper services are available.

This concept relies on the County to provide adequate opportunities for all categories of urban growth within a variety of designated centers.

The urban centered concept is expressed through four area designations on the General Plan Diagram, these are:

- The Specific Urban Development Plan (SUDP)
- The Rural Residential Center (RRC)
- The Highway Interchange Center (HIC)
- The Agricultural Services Center (ASC)

Each of these area designations uses the urban centered concept to provide for intensive urban development and to protect agricultural and open space land from uncontrolled sprawling urban development. In varying degrees, all have public services to support intensive development. The expansion of these areas occurs only through a General Plan Amendment and requires a thorough analysis and a decision by the Planning Commission and the Board of Supervisors through the public hearing process.

The general location of all existing urban communities is shown on the Land Use Policy Diagram, and in more detail, on individual maps for each center. The geographic distribution of these centers reflects current population concentrations. The six cities are evenly distributed, with three along Highway 99 in eastern Merced County and three west of the San Joaquin River. Unincorporated communities are more concentrated in eastern Merced County reflecting larger population concentrations based on historic growth. Information provided in the Agricultural Chapter (Table VII-8) indicates that as of 1984, there was enough vacant land designated within the major incorporated and unincorporated urban communities to accommodate a 371 percent increase in population. While the County encourages normal, healthy growth in the existing communities it is also recognized that with few exceptions, growth within these communities occurs at the sake of the most productive agricultural soils in the County because they are concentrated on the Valley floor.

To reduce agricultural impacts from urban development and better manage growth needs, the policies of this Chapter, contained in Section "C", provide guidelines on how communities are established, developed and expanded. A shift in basic policy provided in this Year 2000 plan from the 1978 urban centered concept recognizes that a legitimate need exists to accommodate the establishment of new communities on other than prime and productive soils which can be geographically located to satisfy regional growth needs. As will be discussed in the following subsections for each urban boundary type, new SUDPs and HICs can be created under certain conditions, many smaller SUDPs can qualify for redesignation as ASCs, while creation of new RRCs is to be avoided. Criteria will also be identified which have been established to minimize impacts when evaluating the expansion of existing SUDPs and other urban boundaries.

b. Specific Urban Development Plan (SUDP)

The Specific Urban Development Plan area or "SUDP", is the broadest General Plan boundary designation intended to accommodate all classifications of urban land use. SUDPs were called "urban expansion areas" of communities in the 1978 Land Use Element. An SUDP has a boundary line which is recognized as the ultimate growth boundary of the community over the life of the Plan. All land within the SUDP is planned for eventual development in a mixture of urban and urban-related uses, as designated on the SUDP diagram for each community. Whenever land is added to an SUDP, the decision is made that it will ultimately be converted to an urban use.

As of the adoption date of this General Plan, there are 246 SUDPs designated within the County. Of this total, six designate incorporated cities (Atwater, Dos Palos, Gustine, Livingston, Los Banos and Merced). Seven others identify the largest unincorporated communities with both public sewer and water systems. The County has adopted "Community Specific Plans" for these communities providing detailed text and policy reflecting local planning needs and desires (Delhi, Franklin/Beachwood, Hilmar, Le Grand, Planada, Santa Nella and Winton). The¹ boundaries of these SUDPs are usually the same as the "Sphere of Influence" of the local community service district. Six other SUDPs have a public sewer and/or water system but no Community Specific Plan (Ballico^{1*}, Celeste, Midway, South Dos Palos, Snelling and Volta^{1*}). The remaining five SUDPs lack urban sewer and water infrastructure and have a more limited urban function (Cressey, Dos Palos "Y"^{1*}, El Nido, Stevinson and Tuttle).

^{1*} Ballico, Volta and Dos Palos "Y" are in the process of construction and/or applying for grant funds for community water systems.

To accommodate the growth that will be generated by UC Merced, the County has approved the University Community SUDP located south of the Campus site east of the Merced SUDP.

Depending on the level of urban services available, development is allowed at a higher density and to a greater extent within an SUDP than anywhere else in the County. The availability of public services, especially public sewer systems, makes this higher density possible.

To accommodate County growth pressures while satisfying the overall goals of the General Plan, various policies and criteria have been established for considering expansion of SUDP boundaries and for the establishment of new SUDPs.

SUDP expansion occurs through consideration of several factors: the agricultural value of the land involved and the impacts of expansion on adjacent agricultural and open space lands, urban service availability, the amount of vacant available land already within the community and consistency of the expansion with local planning goals outlined through the Community Specific Plan. These concerns were formulated to ensure that community growth occurs in a logical and orderly manner so that urban services are committed to viable developments rather than purely speculative projects.

One kind of SUDP expansion that is occurring in Merced County that needs to be considered in the General Plan is the planned urban expansion of existing cities across County lines.

Any future planned urban expansions in these cross-County areas should be considered like any other proposed SUDP expansion in the County. They should be reviewed against the same ten criteria under Goal One of this Chapter prior to being adopted as General Plan Amendments by the Board of Supervisors.

The establishment of new SUDPs will be dependent upon meeting the dual goals of locating areas for growth off productive agricultural land and providing urban centers in geographic locations which will help accommodate that share of growth which traditionally occurs in the unincorporated portions of Merced County. However, rather than accommodating only the residential needs of these commuters in scattered suburban subdivisions, the County's policies are oriented at providing for a balanced community involving full urban infrastructure and services with employment generating land uses and institutional facilities. Policies are included to ensure the SUDP is of an adequate minimum size to accommodate reasonably projected land and infrastructure needs for 10 years of growth. To satisfy other General Plan goals, the policies contained in Section "C" of this Chapter also require that a new SUDP be established through adoption of a Community Specific Plan which identifies the purpose and function of the community and details the mixture of land uses including any proposed affordable housing or employment generating land uses.

c. Rural Residential Center (RRC)

In contrast to SUDPs, the Rural Residential Center (RRC) designation provides for urban or suburban residential development at lower densities and generally without the full urban services provided in a SUDP. Additional land use activities include accessory agricultural uses such as livestock pasturing, horse stables and hobby farming (permitted on parcels of one acre or greater) and recreational and institutional facilities which are subject to Conditional Use Permit approval.

The Year 2000 General Plan policy update recognizes that continued RRC development may result in problems not contemplated when these areas were established. When the A-R zone was first established with the County Zoning Ordinance in 1955, its main role was to allow small residential parcels (10,000 square feet) with accessory agricultural uses and to prohibit commercial poultry, dairy and other concentrated animal raising facilities in fringe areas of the cities of Merced and Atwater. Although the 1965 General Plan mentioned A-R Zoning at one-half acre densities, the RRC boundary designation was not established in the General Plan until 1978. The RRC boundaries were then established to accommodate rural residential housing needs reflecting existing A-R zoned property and it recognized an increase in the minimum lot size to one acre, adopted in 1974. Finally, with the 1989 General Plan update the potential role of the RRC as a land use transition or buffer between higher density SUDP development and rural open space land, was discussed.

The General Plan RRC policy has historically been written to provide consistency with pre-established A-R zoning. It is evident that there are many problems with continued traditional build-up of these centers: they are an extremely inefficient land use in terms of agricultural land conversion and in terms of service delivery costs to the County; the location of large A-R zoned areas north of Merced and south of Atwater does not serve as a realistic buffer because they are not adjacent to high density urban areas; there is the potential that groundwater supplies will become contaminated from the continued concentration of septic tanks on one acre lots; and potable water for individual wells cannot always be obtained due to stricter drinking water standards.

With only 20% of the 6,400 acres of RRC land developed in 1990, opportunities exist to provide development options which avoid the problems arising from historic A-R zoning. This large land vacancy figure also supports the policy that no new RRCs are needed and the expansion of RRC boundaries should be strictly scrutinized by reviewing the development options in existing established urban centers. To improve development efficiencies while retaining the rural character, RRC policies have been modified to allow consideration of an overall density of three (3) dwelling units per acre when community sewer and water systems are provided. Applications for subdivisions over a one unit per acre density will be subject to provision of an environmental study identifying, at a minimum,

groundwater needs and traffic generation impacts. This density increase will promote more efficient residential land uses, help make RRC housing more affordable by reducing lot costs, and reduce potential groundwater impacts from proliferation of on-site septic tanks.

The RRC policies outlined in Section "C" of this chapter recognize the continued rural residential focus of these centers while providing three development options:

- 1) development at one net acre densities on community sewer or individual septic systems with County Health Department approval and with some allowance for animal husbandry activities;
- 2) one-third net acre minimum lot subdivisions where community sewer and water systems are installed meeting State Regional Water Quality Control or County standards, whichever are more stringent,
- 3) clustered residential development achieving three units per gross acre overall density when a Planned Unit Development (PUD) is established reserving permanent areas for agricultural, recreational, or other open space uses in return for a small lot or multi-family residential development in appropriately located areas of the site which are connected to community sewer and water facilities.

It is intended that the incentive of increased densities provided by these development options will encourage developers to install community service facilities under the control and maintenance of appropriate entities, thereby improving RRC development efficiency and addressing possible groundwater concerns. It is hoped that the RRC designation, with the options outlined, will better achieve the overall goals of this Year 2000 General Plan.

d. Highway Interchange Center (HIC)

Merced County is traversed by one interstate (I-5) and several State highways (S.H. 165, S.H. 152, S.H. 140, S.H. 99, S.H. 59, and S.H. 33). These highways extend for considerable distances between communities where transportation-related services exist. The State and County have determined a need to provide specific locations for specialized, limited intensive development necessary to serve the traveling public and at the same time preserve traffic capacity, safety and the visual characteristics along scenic highways. In 1965, the County established Highway Interchange Center (HIC) "rings" of one mile radius at five locations along Interstate 5. Since then, more effective County land use and zoning codes have eliminated the need for one mile HIC rings while still satisfying State goals.

HICs are distinct from SUDPs as they do not provide for a full variety of urban land uses. Rather than serving as a center for housing and industry, they are located to satisfy commercial service needs of highway travelers. HICs may be considered at

interchanges of state and interstate highways; at-grade or less than full interchange locations shall be avoided. General Plan criteria for HIC designation, as contained in the policy and implementation section of this chapter, includes the agricultural productivity of a site, safety of access, roadway capacity, location relative to other intensive-use designated areas and effect on public services and the environment. HICs are not to be located where it is determined that a conflict with, or competition with an SUDP would occur.

All properties within an HIC are considered eligible for consideration of the specific "HIC Commercial" designation and zoning with the approval of a development project. This "HIC Commercial" land use designation is unique to established HICs and is the only urban designation considered compatible. Typical land uses which may locate in these HIC Commercial areas include motels, restaurants, truck stops, gas stations, and other commercial uses oriented to highway travelers. Properties within HIC rings that do not have specific development projects approved, may be designated for rural uses such as "Agricultural" and "Foothill Pasture."

e. Agricultural Services Centers (ASC)

The 1978 revision of the Land Use Element contained policy for urban expansion areas (SUDPs) and the Land Use Diagram established 24 SUDPs. That document did not recognize the difference between the larger SUDPs with full urban services and smaller SUDPs, which reflect only concentrations of rural populations. In contrast to the larger full-service SUDPs which have wide variety of urban land uses, many smaller SUDPs consist of limited residential and service commercial land uses which are oriented to meeting the needs of the rural population around the SUDP.

With adoption of the Agricultural Element in 1984, the County recognized that many of these small SUDPs actually function as an Agricultural Services Center (ASC) based on several characteristics: lack of urban services, stable or declining population, isolated location, and the current agricultural orientation of existing land uses. Because SUDPs were established to provide areas for urban growth where public services are available, development in these smaller SUDPs could result in problems such as inadequate public services including schools, parks, police and fire protection, groundwater impacts from individual septic systems and wells, and conflicts with adjacent agricultural and open space uses. Redesignation of these smaller communities as ASCs would avoid these problems. Rather than providing a full range of urban services for a local population base, an ASC would serve in a capacity much like these small SUDPs do at present. An ASC would provide a location for agricultural services, farm support operations and convenience commercial services for the rural population. A limited amount of housing for those supplying these services would be allowed, not to exceed a density of one dwelling unit per acre. The Agricultural Chapter contains a listing of possible uses that could be permitted in a new "ASC" zoning classification which

would implement plan policy. It also identifies characteristics in some of the smaller SUDPs which suggests redesignation from an SUDP to an ASC may be appropriate (including Ballico, Cressey, El Nido, Stevinson, Tuttle and Volta).

3. Rural Areas

In a 1985 special census, the Federal Government determined that based on population increases, Merced County qualified for designation as an urban rather than a rural county. On a localized level, however, there are a wide range of land use activities reflecting both urban and rural characteristics. The General Plan contains policies oriented to the distinction between rural and urban areas and land uses. The basic principle for land use in the County since the 1978 Land Use Element has been the "Urban Centered Concept." This concept directs urban development to identified centers as described in the preceding section of this Chapter. This concept also translates into policy that rural areas have agricultural and other open space values which must be recognized and protected.

a. Rural Land Use Descriptors

The General Plan identifies two rural land use designations, reflective of the dominance of agricultural activity in the County. While all rural areas contain a variety of open space values, as identified in the Open Space/Conservation Chapter, the majority of this area is used for cropping or pasturing activities. Similarly, the County's economy is heavily dependent on the income and jobs generated by these agricultural activities.

The following are descriptors of the "Foothill Pasture" and "Agricultural" land use designations used in Land Use Policy diagrams:

FOOTHILL PASTURE

The Foothill Pasture land use designation is generally applied to lands on the east and west sides of the County, the Sierra Nevada Foothills and the Diablo Range respectively. Characteristic features of these areas include: slopes greater than 4%, elevations greater than 200 feet above sea level, slow to very rapid water runoff potential, moderate to severe erosion potential, moderate to poor water availability, thin topsoils and/or hardpan subsurfaces.

Primarily, the Foothill Pasture areas are used for non-cultivated agricultural practices which typically require larger areas of land due to soil quality, limited water availability and steeper slopes. However, cultivation practices do occur where water is available, slopes are moderate, and soil quality is improved. In general, as elevations increase, wildlife habitats become increasingly predominant and agricultural practices less predominant. Other land use activities which may occur in Foothill Pasture designated areas

include, livestock facilities, waste water lagoons and agricultural commercial facilities. Certain nonagricultural uses may also be found including mineral resource extraction and processing, institutional facilities, outdoor public and private recreational facilities, and all accessory uses related thereto. Housing is considered an accessory use to the primary activity of a site and may be in the form of manufactured or conventional single-family dwelling units, or group quarters for farm laborers.

The zoning classification considered most compatible for Foothill Pasture designated areas is generally A-2 (Exclusive Agricultural). However, depending on certain characteristics, including water availability, A-1 (General Agricultural) and PAID (Planned Agricultural Industrial Development) zoning may also be compatible.

AGRICULTURAL

The Agricultural land use designation is generally applied to lands in the "valley floor," between the Sierra Nevada Foothills and the Diablo Range. Characteristic features of the areas designated Agricultural generally include: slopes less than or equal to 4%, elevations less than 200 feet above sea level, very slow to moderate water runoff potential, very limited to moderate erosion potential, moderate to excellent water availability, and, deeper and more fertile topsoils.

Primarily, the Agricultural areas are used for cultivated agricultural practices which rely on good soil quality and water availability, and minimal slopes. Also, many non-cultivated agricultural practices occur in these areas for various reasons. There are other lands within these areas which have no agricultural use but which have high open space values for recreation or wildlife. Other land use activities which may be appropriate include livestock facilities, waste water lagoons, and agricultural commercial facilities. Certain nonagricultural uses may also be found including mineral resource extraction and processing, outdoor public and private recreational facilities, and all accessory uses related thereto. Housing is considered an accessory use to the primary activity of a site and may be in the form of manufactured or conventional single-family dwelling units, or group quarters for farm laborers.

The zoning classifications generally considered most compatible for areas designated Agricultural are A-1 (General Agricultural) and A-2 (Exclusive Agricultural). Depending on certain characteristics, the PAID (Planned Agricultural Industrial Development) zone may also be compatible.

These designations, while applied primarily to rural areas, may also identify land within urban boundaries which contains agricultural related uses or which is undeveloped and lacks urban services. These designations would be preceded by

the urban boundary designation in these instances (i.e. SUDP Agricultural, HIC Foothill Pasture, etc.) Conversely, there are certain land uses or characteristics which are not agricultural in nature but which exist in rural areas. These uses (including institutional, recreational, and solid waste facilities) are discussed in later sections of this chapter. The policies of the rural land use designated areas recognize their usefulness for many activities which are compatible with agricultural and open space values.

It should also be recognized that the vast rural area of the County (containing 95% of all land) has a primary value for the enjoyment of scenic beauty. These scenic values include dry pasture and mountainous terrain on the east and west sides of the County, the green and colorful agricultural areas, and special visual features like the many lakes and river courses. Section B.8. in the Open Space/Conservation Chapter (VI) discusses these values in more detail.

b. Building Intensity and Population Density

Rural areas of the County are primarily utilized for agricultural purposes which involve a wide variety of activities. These areas generally contain non-intensive or "extensive" agricultural uses such as dry pasture, row crops and orchards. There are some agricultural commercial uses, however, which are more intensive in character including dairies, poultry ranches, and agricultural processing facilities. Rural areas are also utilized for specific non-agricultural uses which are generally compatible in a non-urban setting based on their characteristics or because they satisfy regional needs. Examples include mineral resource extraction activities and public facilities. In addition, many rural areas within the County actually have nonagricultural characteristics and are more noted for their open space value such as recreation areas, wetlands, flood plains, natural wildlife habitats, etc.

Current Distribution of Intensive Activities

The term "intensive" as used in this General Plan, refers to uses which involve buildings and activities which may generate employment, traffic, noise, odors, smoke or other impacts. The concept of "intensity" relates to the degree or amount of these impacts for any given land use activity. The Government Code requires that the General Plan contain recommended standards of building intensity and population density for the various districts identified in the Plan. This section of the chapter will cover the assessment for rural areas and the next section will discuss standards of building intensity and population density in areas designated for urban land uses.

The distribution of intensive activities in rural areas can be illustrated through two diagrams. In the Agricultural Chapter of this General Plan (Chapter VII), Map 31 shows the location and distribution of various agricultural commercial support and processing operations throughout the County. The impact from these facilities on

the immediate area varies tremendously depending on certain factors including: the amount of building coverage, number of employees and vehicle trips generated, noise and odor generation, drainage methods and other characteristics of intensity. This map illustrates that the majority of agricultural support and processing facilities are concentrated along the Highway 99 corridor of the County. Otherwise, these operations are highly dispersed throughout the rural areas. On a more localized basis, these facilities do not approach a concentration that creates an intense environment that could be defined as urban in character.

Other uses in rural areas which are not agricultural-related can have intensive characteristics, such as schools and fire stations. Map 1 identifies the larger institutional and public facilities located in the County including those outside urban centers. While these facilities are widely dispersed throughout the County, they are primarily within urban areas.

To illustrate the present range of building intensity considered appropriate in rural areas, the following six examples are presented in increasing order of intensity or physical alteration to the land:

- 1) The seasonal wetland area located in the center of the County, generally along the San Joaquin River. The area has primarily an open space wildlife value with seasonal activities including cattle grazing in the summer and duck hunting during the hunting season. The only improvements usually involve temporary duck blinds and cabins, with very limited employment and traffic generation.
- 2) Large cattle ranches in the eastern County foothills usually involve several square miles. A ranch may include a ranch headquarters with 2 or 3 homes and a barn, but no other major structures. This area is also home to various forms of wildlife that are generally compatible with cattle grazing. Again, employment and traffic generation is very limited.
- 3) On a more intensive level, an example of a typical large scale poultry ranch would involve a 70-80 acre parcel. Such an operation would normally include about 45 poultry sheds comprising 18-20 acres containing approximately 1 million birds. Additional uses would involve 3 homes for employees and accessory outbuildings covering ½ acre, drainage detention basins covering 2 acres and manure storage areas covering another 2 acres. Such facilities tend to have a minimum of 3 full-time employees and generate approximately 5 truck and 15 automobile trips per day.
- 4) An example of a large scale dairy consists of approximately 1,600 cows on a 60-70 acre site. Land uses include 25-30 acres of corrals including free stall barns for shelter, a 4 acre waste water lagoon, 3 acres of feed storage and 1/4 acre covered by a milk barn. Such a facility would involve 10 employees and

generally 14 truck and 24 car trips per day. In addition, up to another 1,000-1,500 acres of adjacent land may be controlled by the same owner and used for growing alfalfa and corn for feed and for disposal of liquid waste from the dairy lagoon.

- 5) An example of an intensive nonagricultural rural use is the County's Billy Wright Road Landfill facility. The site consists of 87 acres in the westside foothills adjacent to vineyard and grazing lands. Due to topography, only 35 acres of this site is available for landfill use, but the balance is fenced and involves no farming or other activity. Large amounts of earth are disturbed to bury solid waste deposited in this facility. There are 2 employees and approximately 50 vehicle trips per day are generated by the facility (primarily garbage trucks).
- 6) An example of the most intensive rural activity would involve a large agricultural packaging and processing facility on a 20-30 acre parcel. The facility may employ 400-425 people at peak periods and generates approximately 1,300 average daily vehicle trips. The site would contain 5 to 6 acres of structures, 3 acres of waste water ponds and another 2.5 acres for parking. In addition to the plant site, the operator of the facility may control 200-300 acres of adjacent farmland which is used for row crops or orchards as well as field disposal of the processing plant's waste water.

The last two examples have characteristics which are very unique in rural areas of the County. The predominant characteristic of Merced County's rural areas is very non-intensive in nature involving pasture, row crops and orchards with limited accessory housing for farm owners and their employees.

The location of new intensive agricultural support and institutional facilities will continue to be distributed evenly throughout the County. These facilities tend to locate near available agricultural produce supplies or in more isolated locations specifically to avoid conflicts with adjacent properties (for example, poultry and dairy operations and institutional uses such as landfills). It is not anticipated that multiple large agricultural processing plants would locate on adjacent parcels in an agricultural area. Agricultural processing facilities generally control adjacent farmland areas, both for supply of produce and as a buffer between other properties.

The information presented above demonstrates the wide variety of "building intensities" which occur in rural designated areas. The following narrative presents the recommended standard of building intensity for the two rural land use designations.

RURAL STANDARDS OF BUILDING INTENSITY

Agricultural - one dwelling per 20 acres; agricultural commercial and appropriate nonagricultural structures generally don't exceed 10 percent lot coverage. Additional dwellings and greater building coverage may be approved under Conditional Use Permit review up to 99 percent coverage.

Foothill Pasture - One dwelling unit per 160 acres; and agricultural commercial and appropriate nonagricultural structures generally don't exceed 1 percent coverage. In areas with certain characteristics and which are zoned A-1 (General Agricultural), this standard is closer to the Agricultural designation. Additional dwellings and greater building coverage may be approved under Conditional Use Permit review up to 99 percent coverage.

Current Distribution of Rural Population Density

Outside urban centers, concentrations of population occur as a result of several activities. Residential activities involving single family dwellings, mobile homes, and farm labor camps result in permanent or seasonal population concentrations. On a temporary basis, population concentrations also occur during work hours at employment generating facilities and at various times in recreational areas. While farm labor camps, agricultural production and processing facilities and certain institutional uses may involve larger population densities on a local level, they constitute a very low density of population on an area-wide or regional level.

In 1980, the County's population was concentrated in urban centers with 75,961 people (56.4%) in cities, and 21,749 people (16.2%) in unincorporated communities. Only 36,848 people (27.4%) lived in rural areas, scattered over 1,883 square miles of the County. The population growth between 1980 and 1987 shows a continuation of this trend with 80% of the increase in urban centers and 20% in rural areas. Based on the General Plan's "urban centered concept" and the availability of urban services which help accommodate development, this trend should continue to the year 2000.

Two maps are presented to help identify the rural population density of the County. Map 2 shows the approximate 1980 distribution of population in the county. This figure highlights the urban concentration of population primarily within cities unincorporated communities (SUDPs) and suburban RRCs. It also identifies that rural population densities are highest along the Highway 99 corridor between the Stanislaus County line and Merced City.

A second map which is located in the Agricultural Chapter of the General Plan (Chapter VII), shows the variation in parcel sizes in the A-1 (General Agricultural) zoned portion of the County as of 1984 (see Map 30). Other rural areas are in the A-2 (Exclusive Agricultural) zone which has a 160 acre minimum parcel size, with

accompanying low population concentrations. Map 2 also reflects a concentration of smaller parcels in the area along Highway 99 which corresponds to the population distribution discussed above. Most parcels in this area are still over 20 acres in size. On a Countywide basis, the general overall rural population density is approximately 0.06 persons per acre, but even in the more concentrated areas, like along Highway 99, one person per 10 acres would be an unusually high residential density.

Based on this information, it is evident that rural population density is not a major consideration for determining regional growth needs or impacts. However, on a localized level, concentrations of population on a parcel may cause traffic or other service problems to the immediate area. Even one home on a small rural lot may create conflicts with adjacent agricultural uses. (This issue is discussed elsewhere in this chapter and in the Agricultural Chapter.)

As with building intensity, averages for population density vary widely throughout the rural areas of the County. The following recommended standards are provided for the two rural land use designations recognizing that density on one parcel must be compared with densities of surrounding properties to determine a rural density distribution.

RURAL STANDARDS OF POPULATION DENSITY

Agricultural - Generally 3.2 persons per 20 acres (one dwelling), but with approval of a Conditional Use Application for farm labor housing camps, the population density for any one parcel could approach 5-10 people per acre where adequate septic systems are provided.

Foothill Pasture - Generally 3.2 persons per 160 acres (one dwelling), but with approval of a Conditional Use Application for farm labor housing camps, the density could increase to 1 person per acre where adequate septic systems exist. For areas with certain characteristics, zoned A-1 (General Agricultural), the density will be closer to that in the Agricultural designation.

4. Urban Areas

As identified above in Section B.2., the Land Use Chapter designates four types of boundaries or centers within which urban development is directed. These centers provide opportunities for a variety of urban land uses. The SUDP areas may contain all urban and rural land use designations while the other three centers are oriented to specific types of activity: The RRC is oriented to agricultural residential development; the HIC serves highway oriented commercial uses; and the ASC accommodates agricultural residential, convenience commercial or agricultural industrial uses.

The designation of specific land uses within urban centers should be based on a careful evaluation of existing use characteristics of the area, compatibility of proposed uses, site access, urban service availability, the presence of any hazards to development and other environmental constraints. This section of the chapter presents a description of the urban land use designations and presents a discussion on the intensity and density characteristics of urban areas, city fringe area development issues, the relationship of the Land Use Chapter with Community Specific Plans and urban service issues.

a. Urban Land Use Descriptors

The Land Use Policy Diagram identifies ten different urban designations which are used within urban centers. They basically involve three categories of use - residential, commercial and industrial. It should be clear that there are also "combining" designations utilized with the base land use designation reflective of a specific use (recreational, institutional, etc.) which will be presented in Section B.5. The two rural designations may also be utilized within the four types of urban centers.

These designations are usually referred to in relation to the specific center in which they are applied - for example: industrial designated land in Hilmar would be identified as "Hilmar SUDP Industrial", while land designated for apartment or condominium development in Planada would be referred to as "Planada SUDP Medium Density Residential."

The following are descriptors of the urban land use designations of the Land Use Policy diagrams:

AGRICULTURAL RESIDENTIAL

The Agricultural Residential land use designation is generally applied to areas considered appropriate for the construction of single-family dwelling units on large lots in a semi-rural environment, with less than a full range of public services. These areas may be used as a buffer between urban and rural land use activities. Agricultural Residential areas are therefore, usually located at the edge of an urban area within an RRC.

Conventional or manufactured single-family dwelling units are the primary land use activity in these areas. Buildings may be two stories high and homes may be constructed up to a maximum density of one (1) unit per acre. Other land use activities may include recreational and institutional facilities, animal husbandry or hobby farm activities, and all necessary accessory uses related thereto.

The zoning classification considered most compatible in areas designated Agricultural Residential is generally A-R (Agricultural Residential), although A-1 (General Agricultural) or A-2 (Exclusive Agricultural) zoning is compatible in areas which are still in agricultural or open space uses.

VERY LOW AND LOW DENSITY RESIDENTIAL

The Very Low and Low Density Residential land use designations are generally applied to areas considered appropriate for the construction of single-family dwelling units within an SUDP. The Low Density Residential areas provide for the majority of housing opportunities throughout the unincorporated communities in the County. The Very Low Density Residential areas are normally utilized in areas which may lack public water or sewer systems.

Conventional or manufactured single-family dwelling units are the primary land use activity in these areas. Buildings may be two stories high and homes may be constructed up to a density of 3.5 units per acre (Very Low Density Residential) or 8.0 units per acre (Low Density Residential). Other permitted land use activities may include recreational and institutional facilities, and all necessary accessory uses related thereto.

The zoning classifications considered most compatible in areas designated Very Low and Low Density Residential are generally R-1 (Single Family Residential) and R-1-5000 (Single Family Residential).

MEDIUM AND HIGH DENSITY RESIDENTIAL

The Medium and High Density Residential land use designations are generally applied to areas considered appropriate for the construction of multiple-family housing units within an SUDP. Some Community Specific Plans may use the Medium Density Residential land use designation for accommodating single-family dwelling units on smaller lots (approximately 5,000 square feet). These land use designations are typically located closer to the center of a community than other, lower density, residential areas. Multiple-family dwelling units in the form of duplexes, triplexes, fourplexes, townhouses, etc., are the primary land use activities in these areas, except as noted above. Buildings may be two stories high with dwellings constructed up to a density of 15 units per acre in the Medium Density Residential areas, and buildings may be three stories high with dwellings constructed at a density of up to 33 units per acre in the High Density Residential areas. Other land use activities may include recreational and institutional facilities, and all necessary accessory uses related thereto.

Zoning classifications considered most compatible in areas designated Medium and High Density Residential are R-1-5000 (Single Family Residential), R-2 (Two-Family Residential), R-2-1 (Two-Family Residential, Single Story), R-3 (Multiple-Family Residential), R-3-1 (Multiple-Family Residential, Single Story), and R-4 (Multiple-Family Residential).

COMMERCIAL TRANSITION

The Commercial Transition land use designation is generally applied to recognize selected locations within an SUDP, along the fringe of downtown commercial areas, which are experiencing a trend towards, or away from, commercial activities. These areas may serve as a buffer between the downtown commercial areas and abutting residential neighborhoods. Where this designation is applied to residential neighborhoods experiencing a trend towards commercial activities, new residential units are not encouraged but existing units may be replaced or slightly expanded. The same concept applies to commercial structures in transitional downtown areas experiencing a trend towards residential uses.

Generally, the land use activities considered appropriate in these areas are similar in scale and intensity with those uses listed in the Neighborhood Commercial areas where the trend is from residential to commercial activities--and land uses similar in scale and intensity to those uses listed in the Medium Density Residential designation are considered appropriate in those areas experiencing a trend from commercial to residential activities.

The zoning classification considered most compatible in areas designated Commercial Transition is C-T (Commercial Transition).

NEIGHBORHOOD COMMERCIAL

The Neighborhood Commercial land use designation is generally applied to areas within an SUDP which are determined appropriate for commercial uses which serve the daily needs of the local community or neighborhood. These areas are typically located within, or in the vicinity of, residential neighborhoods. Smaller unincorporated communities may use this designation as their main commercial area.

Typical uses which may locate in the Neighborhood Commercial areas include convenience and commercial activities for serving the daily needs of the neighborhood. Institutional and recreational uses may also locate in these areas. Uses in these areas are normally smaller in scale and intensity when compared to the General Commercial designated areas because they serve a

much smaller market area. Generally, uses in these areas are compatible with the surrounding neighborhood and do not exceed two stories in height.

The zoning classifications considered most compatible in areas designated Neighborhood Commercial are generally C-1 (Limited/Neighborhood Commercial) and C-P (Professional /Administrative Commercial).

GENERAL COMMERCIAL

The General Commercial land use designation is generally applied to areas within an SUDP considered appropriate for general retail commercial activities. Usually, these areas are located near the center of a community to encourage grouping of commercial activities in a central business district or core, possibly with other non-residential uses. The grouping or mixture of businesses is important in these areas because the activities can complement one another and may provide a certain level of convenience and efficiency to the customer and business. These areas typically draw customers from up to 5 miles away while regional commercial activities may draw from a radius of 20 miles or more. A business's draw depends upon various factors including the type of use, the development characteristics of the area, accessibility, etc.

Typical uses which may locate in the General Commercial areas include retail commercial activities, personal and professional services. Recreational and institutional uses may also be considered appropriate in these areas.

The zoning classifications considered most compatible in areas designated General Commercial are C-1 (Limited/Neighborhood Commercial), C-2 (Commercial) and C-P (Professional/Administrative Commercial).

INDUSTRIAL

The Industrial land use designation is generally applied to areas within an SUDP considered appropriate and necessary for manufacturing and wholesale activities. Generally, industrial activities locate along major transportation routes and/or towards the fringe area of the community. Typically, industrial uses which locate along major transportation routes tend to be involved in processing and distribution activities, while those which locate towards the fringe areas tend to be service or storage oriented.

Typical uses which may locate in these areas are involved in the research, processing, distribution, storage, or the wholesale trade of various materials and products. Transportation facilities, such as air, rail or motor freight transfer services or maintenance facilities, and recreational or institutional activities may also be considered appropriate in these areas.

The zoning classifications considered most compatible in areas designated Industrial are generally M-1 (Light Manufacturing) and M-2 (General Manufacturing).

UNIVERSITY COMMUNITY MULTIPLE USE URBAN DEVELOPMENT

The University Community Multiple Use Urban Development designation is applied exclusively to the University Community SUDP. This unique designation supports the University Community Plan which provides the policy frame work for the urban development pattern for this SUDP. The University Community Plan in itself does not entitle development within the University Community SUDP. The approval of Specific Plans establish the Urban zoning and development standards for the Community.

Until the establishment of zoning within this SUDP through the approval of Specific Plans, the appropriate zoning classifications are A-1 (General Agricultural) and A-2 (Exclusive Agriculture).

RESERVE

The Reserve land use designation is generally applied to areas within an SUDP which are considered appropriate for intensive urban land use activities at some future date, depending upon community growth needs and availability of urban services, utilities and facilities. Usually these areas are outside of a local water and/or sewer district, but typically are within the districts ultimate service area boundary (Sphere of Influence).

Land may be designated "Urban Reserve", denoting some general type of future urban activity to be determined when the property is redesignated, or it may be classified for a specific use such as "Residential Reserve". Reserve areas are intended to remain rural in their character, until they are redesignated, and they normally contain agricultural and other open space land uses.

The zoning classifications considered most compatible in areas designated Reserve, are A-1 (General Agricultural) and A-2 (Exclusive Agricultural).

b. Urban Building Intensity and Population Density

The Government Code requirements direct that the General Plan contain recommended standards of population density and building intensity recommended for the various districts and other areas covered by the Plan. Population density is the number of people in a given area (usually an acre), while building intensity refers to the character of the use of a building and its size and height. (This discussion was presented above in Section 3.b. for rural areas.) The standards for urban land uses are much more specific than those for rural areas.

As will become evident from the following tables and figures, residential designations are more easily associated with population densities than commercial and industrial uses because of the relationship between population per unit and

units per acre. Commercial and industrial designations primarily only reflect employment population levels during working hours. Similarly, for intensity of a building, residential uses are more clearly identified in a number of units per acre range, while commercial and industrial uses vary greatly as to size, height and lot coverage of structures, depending on specific use characteristics.

In Table I-3, the range of population density and building intensity for residential urban land use designations is presented. The range in units per acre identifies Land Use Chapter policy reflected on SUDP and RRC maps. In communities with an adopted Community Specific Plan the range for any designation may be narrower, but is consistent with this overall classification. Likewise, in SUDPs without public sewer and water service, density will rarely exceed one dwelling unit per acre because of septic tank limitations. Population per unit is based on the 1980 census, County-wide average of 3.2 persons per unit, although different unincorporated communities may have a lower or higher individual average. The table also presents a more realistic expected average for population density and building intensity per acre based on past development projects, which is generally lower than the maximum permitted density.

Table I-4 identifies population density ranges for non-residential land uses which generally includes commercial, industrial, public facilities and indoor recreational uses. This table is based primarily on building code occupancy levels and reflects the density of population per square foot during working hours. The square footage of a structure or "lot coverage" of a use depends on many factors, the most significant of which is the occupancy load of the building. Table I-4 also identifies the percentage of lot covered with parking. Where occupancy is high, parking

TABLE I-3

RESIDENTIAL POPULATION DENSITY & BUILDING INTENSITY

Land Use Designation	Range of Units Per Per Acre ¹	Range of Persons Per Per Acre ²	Expected Avg. No. of Units Per Acre ³	Expected Avg. Population Per Acre	Predominate Housing Type	Maximum Height
Agricultural/ Residential	0 – 1	0 - 3.2	0.82	2.6	Detached Single-Family Unit	Two Stories
Very-Low Density Residential	0 - 3.6	0 - 11.5	Not Available		Detached Single-Family Unit	Two Stories
Low-Density Residential	0 – 8	0 - 25.6	4.8	15.4	Detached Single-Family Unit	Two Stories
Medium-Density Residential	0 – 15	0 - 48.0	14.3	45.8	Detached Single-Family/Duplex Apt. Units	Two Stories
High-Density Residential	0.33	0 - 105.6	16.5	52.8	Duplex Apt. Units	Three Stories

¹ Government Code Section 65915 requires the County to allow a 10-25% density bonus, or other financial incentives of equal value if a developer agrees to provide a certain percentage of units within a housing project for low to moderate income persons. However, these provisions of the Government Code have never been applied to a housing project in Merced County and is, therefore, not factored in the building and population figures above.

² Based upon 1980 Census (3.2 persons/unit)

³ Expected average has been calculated from past projects and is only for application in the undeveloped areas of the County designated for Residential uses.

TABLE I-4

NONRESIDENTIAL POPULATION DENSITY AND BUILDING INTENSITY RANGES

	RANGES OF DENSITY OR INTENSITY		
	LOW	MEDIUM	HIGH
<u>Population</u> Ranges Per Sq. Ft. of Building Area *	1 per 300 Sq. Ft. and Greater	1 per 100 Sq. Ft. 1 per 299 Sq. Ft.	1 Per 7 Sq. Ft. 1 Per 99 Sq. Ft.
<u>Building</u> Coverage Ranges as a Percentage of Lot Acre	0-15%	16-29%	30-100%**
<u>Parking</u> Coverage Ranges as a Percentage of Lot Area	0-45%	46-64%	65-100%***
<u>Landscaping</u> and/or Open Areas	40-100%	7-38%	0-5%
<u>Building Height</u>	1 Story	2 Stories	3 Stories

*Uniform Building Code, 1985 Edition, Pages 582 & 583

** 100% Building Coverage Requires Either Off-Site or Underground Parking

*** 100% Parking Coverage is a Parking Lot

requirements will be greater and thus less land area is available for building coverage. A typical example of this relationship is demonstrated in Figure I-1, which shows a constant building size, but different parking coverage because of a higher concentration of employees. This would be typical of the range between a warehouse with limited employment and an office building with higher employment per square foot.

c. Fringe Area Development

The unincorporated area between the city limits and the city SUDP boundary is referred to as the city "fringe area." These locations involve unique land use issues between the City and the County in terms of development coordination and cooperation. Because these areas of County jurisdiction are typically identified for eventual annexation to the City by being within the SUDP, uncoordinated development can create many problems including overlapping service responsibilities, competing urban service infrastructure, inefficient boundaries resulting from leapfrog development and conflicts in land use between City and County areas.

In 1979 the County entered into resolutions of agreement with each of the six cities in the County. These "City-County Agreements" implemented policies of the 1978 Land Use Element regarding development review procedures for various categories of fringe areas. The basic orientation of these agreements is for the County to maintain agricultural uses in the fringe areas until the City is ready to provide urban services and annex the property.

Where the City waives annexation, the County can permit development but must recognize city standards so that improvements will be compatible. As growth patterns change it is critical to periodically review and update the agreements to ensure they adequately reflect the interests of the County while achieving joint City-County goals.

The County and cities mutually designate land uses in the respective General Plans for these areas. Any proposed land use designation change requires consultation between the County and respective city. To coincide more accurately with the nature of the City-County agreements, consideration should be given to establishing a single consistent Land Use designation in these areas such as "Urban Transition" or "Urban Reserve." The County will also review proposed SUDP boundary amendments on the County Land Use Policy Diagram as the cities revise their General Plans and as conditions dictate. As with individual land use designations, the County may adopt a different SUDP boundary than the City to maintain consistency with County General Plan goals.

Another boundary designation has been utilized by some cities to identify unincorporated areas which are of particular concern for long-term city interests. The "Area of Interest" designates land which is outside the SUDP and is not

currently planned for annexation or city service delivery, but which is proximate to city territory. Development in these areas may impact city planning and development efforts. Land use activities in these Areas of Interest are generally limited to agricultural and open space uses, except for areas where substantial urban development exists.

A different type of SUDP “fringe area” that was mentioned in Section B.2.b. above is the planned urban expansion of a city across County lines. The logical and consistent approach would be to treat these cross-County fringe areas like other growth areas and allow them to be annexed to the city upon development. However, this is not possible since a city cannot legally contain territory in more than one County short of amending County boundaries periodically to accommodate growth. A simpler approach is for the County to approve urban land designations and zoning in these fringe areas and negotiate development permitting and approval procedures along with adequate service delivery with the adjacent city through City/County Agreements. These agreements should be in place prior to approval of any General Plan Amendment since these unique city fringe areas are dependent upon the services of the adjacent city. Adequate revenue from the development should also be provided for in the agreement to ensure County benefits from urbanization of the area.

d. Community Specific Plans

Community Specific Plans are subunits of the County General Plan. They are focused plans adopted for the larger unincorporated SUDPs which have public sewer and water systems. These plans are consistent with the overall General Plan and provide clarification and refinement of local community issues and policy.

The seven adopted Community Specific Plans were prepared between 1981 and 1983 with the assistance of local Municipal Advisory Councils. These councils are made up of local citizens appointed by the Board of Supervisors to provide local input to planning and development matters, and general County services. They also comment on individual development applications.

All the Community Specific Plans include a summary of community characteristics and planning issues, identify local plan goals, objectives and policies, and describe land use designations reflected in the SUDP diagram for the community. The designations shown are defined in this Land Use Chapter, but ranges of density or intensity may be further refined in a Community Specific Plan reflecting local needs.

[The University Community Plan, adopted by the Board of Supervisors in 2002, provides the long-range policy framework for guiding development within the University Community SUDP. Due to the very long-range time frame for the development of this Community, the unique land use designation, “University](#)

Community Multiple Use Urban Development’ is applied specifically to this SUDP. Under this designation, development within the University Community can only proceed through the approval of Specific Plans approved by the Board of Supervisors.

A Community Specific Plan can provide more detail or be more limiting than the overall General Plan concerning activities or densities allowed within specific land use categories, however, these regulations must still be consistent with the parameters of this county-wide General Plan.

e. Urban Service Issues

The availability of urban services varies greatly among different communities in the County. The six incorporated cities each provide municipal sewer and water systems as well as other general government services, including police and fire protection.²

All the largest unincorporated communities with a population over 500, have both public sewer and water systems provided by local sewer and/or water districts. Some of the smaller communities have only one public system (sewer or water) and others rely on individual septic systems and wells. With additional standards for water potability, the County Health Department cannot guarantee that drinking water from individual wells is always safe.

Gas and electric services are provided by Pacific Gas and Electric, except for the north central section of the County, which is serviced by electricity from the Turlock Irrigation District. Telephone service is primarily provided by Pacific Bell although two smaller phone companies exist (Continental Phone and Livingston Telephone Company).

The County provides all other public services including sheriff, fire, libraries, courts, road maintenance and general government services. Many communities have a maintenance district or zone of benefit for provision and maintenance of storm drainage and street lights, which is administered by the County. But all other County functions and services are dependent upon Federal or State funding, bond issues, and other local revenues such as property and sales taxes, and direct service fees. Due to increased service demands resulting from population growth and additional State-mandated programs, coupled with a reduction in Federal and State financial support, the County is having a difficult time providing adequate levels of service. To maintain service goals, the County will determine what service levels are adequate for a variety of County functions and identify appropriate means of funding to achieve and maintain them.

^{2*} Some cities also contract with the County for fire protection.

Twenty-three school districts provide the public service of education from kindergarten through 12th grade in Merced County. Every SUDP except Dos Palos "Y" contains a school, and every city contains a high school. Inadequate State funding of school facilities such as buildings and campuses has resulted in inadequate school facilities in rapidly growing areas. The need for new financing mechanisms, such as formation of a Mello-Roos Community Facilities District, may be needed to help provide necessary facilities.

The availability of community sewer capacity and water supply are the most critical components affecting the intensity of development in a community. Public sewer and water systems allow for high concentrations of population on small lots and can accommodate a full range of commercial and industrial land uses. In communities without these key services, development is restricted to large lots (usually a minimum of one acre) which can support on-site septic systems.

The Division of Environmental Health of the County Health Department, is responsible to review and authorize individual septic systems for new development. While the normal standard for these systems is a one acre minimum, problems develop from older, more concentrated developed areas on individual septic tanks. The Health Department is helping several small SUDPs form community water districts to obtain grants to replace the individual well water which has been contaminated (Volta, Ballico, and some older developed areas). Within Rural Residential Centers, individual soil tests for each lot are sometimes required prior to final subdivision map approval. This is common where soil drainage characteristics are bad or groundwater problems are known to exist, to ensure that one acre minimum lots are adequate to accommodate a septic system at minimum risk to groundwater resources.

For communities with public service districts, "can and will serve" letters stating that a district has capacity to supply new development and has made a commitment to serve that development, have been made a requirement for all discretionary development applications prior to processing.

Where capacity is limited, a district may not be able to supply services to a proposed development. Even if the General Plan designates property for development, the timing of projects may be delayed until adequate facilities are available. Usually, new development pays a fee to the local district to help maintain and expand capacity. The district relies on a "Sphere of Influence" boundary to delineate their ultimate service capacity boundary. Discussions in the Circulation and Housing Chapters also address the issue of public sewer and water availability.

5. Special Land Use Issues

There are several special types of land uses which cannot be easily classified as urban or rural according to the basic Land Use Chapter categories. These uses include both

intensive and nonintensive activities which may be appropriate within rural designated areas or within urban communities. The following unique land uses are discussed in this Section: institutional/public facilities, recreational, hazardous/non-hazardous waste treatment or disposal, and airports.

There are also two specific land use issues which will be discussed in this Section: areas subject to flooding and isolated properties which have been designated for urban uses prior to adoption and implementation of the "Urban Centered Concept."

a. Institutional/Public Facilities

Depending on the function and operation of an institutional or public land use its locational needs will vary. A school is more commonly found in an urban setting because of the higher population concentration and the need for adequate public services. However, a County "corporation yard" which contains road repair and maintenance equipment, may need to be located in a convenient rural area. Map 1 presented earlier in this chapter identifies existing and proposed public facilities and similar institutional land uses in the unincorporated areas of the County. In addition, many Specific Urban Development Plan maps contain an "Institutional" designation to recognize these facilities.

Uses considered as public facilities or institutions generally include: schools, libraries, post offices, County administrative or government complexes, military bases, jails, hospitals, fire stations and similar government-owned uses. Population density and building intensity of these facilities is similar to the figures shown for commercial and industrial uses in that the higher occupancy uses generally have lower lot coverage because of parking or open space needs, and the uses with greater coverage tend to have lower population concentrations (such as fire stations). The maximum standards for population density and building intensity shown in Table I-4 will not be exceeded by public facilities.

While the provision of some public facilities will be adequate into the year 2000, other facilities are presently overburdened or face serious problems in the coming years. The most publicized need for facilities involves both the need for new classrooms at existing schools and the need for additional campuses at all education levels. Because school district boundaries overlap city and county territory, problems of overcrowding affect all county residents. The State of California in 1986, mandated a fee system on new construction to help districts provide for added capacity (Government Code Section 53080). Under this mechanism, school districts can charge impact fees for residential, commercial and industrial construction. However, there is no other authority to obtain improvements if the assessments collected do not match school needs, except for the use of Mello-Roos Community Facilities Districts. Presently, not all of the 21 school districts in Merced County charge the full amount (or any fee) allowed under this provision. Other financing mechanisms may also be available, including initiatives like Proposition 98, which was approved by voters in 1988,

establishing a minimum State funding level for schools, although these funds cannot be used for new facilities.

Several types of public facilities and services provided by the County are experiencing limitations including libraries, jail facilities, road maintenance, Sheriff and Fire Department staffing. Although there is generally an adequate distribution of libraries and fire stations, County fiscal problems have kept staffing and equipment at minimum levels. While the County has experienced high rates of population growth in some areas, it has not been able to increase staffing of libraries, fire stations or sheriff "beats" to maintain a constant per capita service level. As a response, library hours have been cut back, and the County recently entered into a contract with the California Division of Forestry to provide fire suppression in an attempt to save County funds without reducing service. The County jail has been overcrowded for years although a new facility was constructed south of the City of Merced. The Circulation Chapter discusses the funding gap between available financing and road construction and maintenance needs. In the review of discretionary applications, such as Conditional Use Permits and subdivisions, impacts on public facilities and their adequacy will be evaluated so that appropriate service levels can be provided.

b. Recreational

The General Plan recognizes recreational areas are both a vital component of healthy communities and a regional resource. This Chapter concentrates on the major recreational facilities such as County, State and Federal parks and recreational areas. Major private recreational uses include several golf courses and hundreds of private duck clubs located in the grassland and marsh areas of the County. Such areas provide valuable wildlife habitat and provides for both passive recreational use in the non-hunting season and cattle grazing. The Open Space/Conservation Chapter lists major private recreational facilities in Figure VI-15.

Citizens of the County utilize both local and regional public recreational facilities, regardless of jurisdiction: County and City parks, State and Federal recreation areas, and regional parks in adjacent cities and counties. Public parks which are located within unincorporated communities, are designated as "Recreational" land uses on the individual SUDP diagrams. City General Plan maps use similar designations for incorporated areas. In rural areas, regional County parks and State and Federal park and recreational areas (consisting of some 65,000 acres), are identified in Map 26 in the Open Space/ Conservation Chapter. These rural outdoor recreation facilities and areas provide a valuable amenity to County residents and are a regional attraction as well. They are generally compatible with and are often an important component of the rural open space resource of the County. Recreational uses are, therefore, generally consistent with the "Agricultural" or "Foothill Pasture" designations on the County Land Use Policy Diagram. The Open Space/Conservation Chapter also contains a listing of County, State and Federal parks and their size. (See Figure VI-14.)

Because of budget pressures, County park maintenance expenditures have been declining. The County participates in the Quimby Act by obtaining park land dedication or fees from new single family residential development at 2.5 acres per 1,000 population (the "Local Recreation Park Land Space and/or Fee Obligation Ordinance"). However, these funds cannot be used for maintenance; it has been difficult to expand park lands and facilities (because of limited funds for maintenance).

Private recreational uses that involve structures (bowling alleys, etc.) tend to have characteristics which are much more commercial in character (higher population concentration, higher traffic generation and increased building intensity). These uses are appropriate within SUDP commercial designated areas rather than in rural areas or in residential or industrial urban classifications. The population density and building intensity standards of these commercial recreational uses are similar to those of other commercial land use activities described in Table I-4 in the Urban Area discussion. (See Section B.4.b. of this Chapter.)

c. Hazardous and Non-Hazardous Waste

The disposal of hazardous and non-hazardous wastes has important land use consequences. The inappropriate use and disposal of toxic substances contaminates soil and groundwater supplies, while locating adequate landfill sites for the rapidly growing State population is proving increasingly difficult because of environmental and urban land use conflicts. The State has mandated preparation of plans to address these concerns which must be consistent with the General Plan. The disposal of non-hazardous solid wastes is the focus of the Merced County Solid Waste Management Plan, updated in 1983. Non-hazardous liquid wastes primarily involve disposal through public sewage treatment plants or individual septic systems. This topic is covered under the "Urban Areas" section of the Chapter. The management and disposal of hazardous waste is the topic of the recently adopted Merced County Hazardous Waste Management Plan.

Non-Hazardous Waste

The central issues involved with non-hazardous waste are: adequate capacity for waste disposal, groundwater protection, air quality, and land use compatibility.

Public sewage treatment systems are regulated by the State Regional Water Quality Control Board, while individual septic systems are regulated by the County Health Department. A summary table of all existing municipal and special district treatment systems and their capacities is presented in Table II-2 of the Circulation Chapter. Their locations are identified in Map 3. These facilities basically treat only non-hazardous waste; any industrial user generally has to pre-treat any waste which the plant cannot neutralize. The Environmental Health Division of the County Health Department regulates individual on-site septic systems to ensure that site characteristics are appropriate. The Health Department also monitors concentrations of these systems to assure cumulative impacts to groundwater are avoided.

Solid wastes within the County are disposed of at one of the two landfill sites in the County. The Merced County Department of Public Works operates these landfills and two transfer stations. The west side of the County is served by the Billy Wright Road Landfill and the Dos Palos Transfer Station while the eastern County is served by the Highway 59 Landfill and the Livingston Transfer Station (See Map 25 in the Open Space/Conservation Chapter). The existing and proposed County landfill sites are designated by a "combining" classification "L" for Landfill on the Land Use Policy Diagram. This combining designation is applied over the base "Foothill Pasture" land use designation and is generally a compatible rural use. Garbage collection services in the County are provided by four municipal systems and six private companies.

The landfill sites are directly managed through "Operating Plans" which were updated in 1985. Overall planning for solid waste collection and disposal systems is contained in the Merced County Solid Waste Management Plan (SWMP). The purpose of this plan is to provide goals, policies and programs to identify adequate solid waste facilities with capacity to meet projected needs and to ensure that land uses adjacent to such facilities are compatible, so as to not compromise their operation. This Plan, last updated in 1983, is presently undergoing its second 3-year review. One of the primary purposes of the SWMP is to recognize recent growth and revise projections of solid waste generation to determine adequacy of existing landfill capacity. Two primary State requirements which will be reflected in this review are how the County will achieve an 8-year capacity at both landfills and how the County will meet the requirement for recycling 20 percent of all solid wastes. It also requires a review of recycling efforts to help prolong the life of landfills and minimize energy and resource consumption. It is currently estimated that the remaining capacity of the Highway 59 site is six years and the Billy Wright Road site is eight years.

The County Department of Public Works is currently proceeding in efforts for expansion of these two facilities. The future landfill needs of the County over the time frame of this General Plan will be accomplished through expansion of these sites, no new sites are presently contemplated. The Highway 59 site is proposed for a 200-acre expansion adding an additional 19 years capacity and a 37.5-acre expansion of the Billy Wright Road site will add 6 years.

Landfill facilities are appropriately located in rural areas of the County because of their undesirable land use characteristics. Public health concerns require that a 50-foot separation exist between the landfill and the highest groundwater, which can only be met in the foothill or mountain areas of the County, which are presently all rural in character. These areas also help protect these facilities from incompatible land uses being located nearby because they are generally restricted to agricultural and open space uses. The "Landfill" designation on the Land Use Policy map is a combining classification used in conjunction with the base "Agricultural" or "Foothill Pasture" land use designations. It reflects a general location of existing and future landfill sites consistent with the policy of this General Plan and with the SWMP.

Hazardous Waste

Hazardous waste can be defined as any waste material having the potential to damage human health or the environment. The county has adopted a State mandated Hazardous Waste Management Plan (HWMP). This plan, which is a new requirement for all counties, must now be approved by the State Department of Health Services. Once State approval is granted, the County has 180 days to incorporate the plan into the General Plan. This plan contains a list of objectives, policies and implementation measures to satisfy the goal to:

"Protect the health and welfare of the public, environment and economy of Merced County through a comprehensive Countywide program to ensure the safe and efficient management of hazardous waste."

In 1986, some 6,796 tons of hazardous waste were generated in the County. The HWMP projects hazardous waste will increase to 10,592 tons by the year 2000. The vast majority of current hazardous waste materials are transported to land disposal sites outside the County. However, land disposal will be prohibited after May 8, 1990 for all untreated hazardous wastes. Pre-treatment can occur on-site where the waste is generated or at transfer stations with treatment or solidification and stabilization capabilities. Facilities which can accept untreated hazardous waste include centers that recycle or incinerate the waste and at "residual repositories" which accept solid materials which are stabilized, solidified or encapsulated to provide for safer storage. The Plan also encourages on-site treatment and recycling by businesses which generate hazardous materials as the most efficient, economic and environmentally acceptable. In addition, the Plan calls for 70 percent reduction in hazardous waste generation through recycling, substitution of less hazardous materials and where possible, elimination of the use of hazardous materials. The Plan provides detailed siting criteria for both on and off-site storage, treatment, disposal and recycling facilities.

d. Airports

There are three types of airports in Merced County: private landing strips for individual property owners and/or crop dusting use; municipal airports (usually within City limits) for public and commercial use; and Castle Airport and Aviation Development Center, which is a regional, multi-jurisdictional public facility capable of accommodating cargo and transit operations, as well as General Aviation. The relationship to land use planning is significant due to incompatibility issues regarding noise and safety.

Aircraft accidents are most prevalent in areas immediately adjacent to airports and primarily occur during takeoff and landing. The area of highest impact are at the end of runways due to higher risk for accidents and higher noise levels during takeoff. With a predominant northerly wind pattern in the County, the areas most impacted are north of runways, however, under some wind conditions, south takeoffs do occur. The noise conflicts are greatest from Castle and Merced Airports because they accommodate jet aircraft. Noise issues are discussed in detail in the Noise Chapter of this General Plan.

The importance of reducing and avoiding conflicts around airports is not only to protect the safety of people and property, but also to ensure the continued operation and possible expansion of public airports. Municipal airports provide a valuable amenity for the commercial health of cities and can provide an important transportation function for both people and freight when commercial services are provided. Airport closure or restriction to operations results from uncontrolled growth in adjacent areas. This General Plan recognizes that the Merced County Airport Land Use Commission was created to protect public use airports and has prepared a 1978 Policy Plan under authority of the State Public Utilities Code.

The ALUC Plan provides policy for compatible land uses near airports and, in conjunction with regulations of the Federal Aviation Administration and the Caltrans Division of Aeronautics, clear zones and safety zones have been established for the five public airports. The ALUC also identified "Interim Airport Areas of Influence" which indicate additional areas important for monitoring land use activities for compatibility. The County General Plan must be consistent with the ALUC Plan or with the purpose of the State law. A determination on this consistency has been made by the ALUC prior to adoption of this General Plan update.

The ALUC Policy Plan has been reviewed by the County and is found to be reasonable for land use planning activities. Therefore, it will be the central policy of the County to review all development projects within identified "Airport Areas of Influence" for compliance with ALUC Policy regarding incompatible land uses, the design of compatible projects in terms of height, lighting, materials used and other relevant safety considerations. In addition, for unincorporated areas outside Airport Areas of Influence, the County will refer all proposals for radio and similar transmission towers to the ALUC for comment prior to approval of a Conditional Use Permit for such uses to avoid safety conflicts.

A special airport issue involves private airstrips. Private airstrips are subject to Conditional Use Permit approval in agriculturally zoned areas under the County Zoning Code. These airstrips generally serve as access to large or remote ranches and/or are used for agricultural related cropdusting activities. While rural areas pose less conflict to adjacent land uses for these airstrips, safety and noise impacts still occur, and their location affects other land uses, including power transmission towers and lines and radio towers, as well as flight patterns of other private and public airports. Because these airstrips provide more of a private benefit than a community or county service, approval should be subject to strict scrutiny and generally limited to agricultural-commercial related activities which provide community benefits commensurate to the health and safety risks created.

e. Flooding

In the previous 1978 Land Use Chapter of the General Plan, rural areas subject to inundation from a 100-year-frequency flood were mapped and designated Agricultural

"Flood Plain". Within urban areas such as SUDPs, however, flood plains were not identified on community plan maps. Each project or building permit was reviewed under the County "Flood Damage Prevention Ordinance" (Section 18.128 of the Zoning Code) to ensure that new construction in these areas is properly designed to minimize hazard to life and property.

With this General Plan update, areas subject to inundation from dam failure are identified in Map 12 and a discussion of flood characteristics is presented in the Safety Chapter. Areas within 100-year flood plains are no longer designated in the Land Use Policy Diagram. Map 15 in the Safety Chapter identifies, in general, the 100-year flood plain in the County. This map was compiled from more detailed maps supplied by the Federal Emergency Management Agency. The maps, known as "FIRM" maps, are maintained by the Planning Department and continuously updated when new Federal information is provided.

The County Flood Damage Prevention Ordinance contains specific requirements for development in various flood zones designated on the FIRM maps. Generally, development should be limited and discouraged in flood prone areas. However, where existing development and urban land use designation are located in a flood plain, there are two general methods to minimize hazards to life and property: raise structures above base flood levels (used primarily for residential uses) or floodproof structures through secure footings (often used for commercial buildings). Another more permanent method of protecting development from flooding involves expensive flood control projects such as those included in the Merced County Streams Group Project. In general, regulations which limit development in flood plains are the best, and most economical means of protecting people and property from flood hazards.

f. Natural Resources

There are a variety of natural resources within the County, most commonly found in rural areas. The "Agricultural" and "Foothill Pasture" Land Use designations provide for recognition of these various resource values. More specific discussion of individual resources is presented in other Chapters of this General Plan. The waters and soils of the County are discussed in the Agricultural Chapter (VII) while most other recognized resources are topics of the Open Space/Conservation Chapter (VI). The location and/or quality of various natural resources are presented in maps referenced in those Chapters.

g. Existing Isolated Urban Designated Properties

Since the first revision of the General Plan Land Use Element in 1978, all property to be designated for urban land uses (residential, commercial and industrial) was required to be located within a designated urban center, such as an SUDP. However, with adoption of the 1978 plan and immediately thereafter, 26 properties were designated for a specific urban use on the Land Use Element Map, which are outside urban centers. The vast majority of these (approximately 23), reflected existing developments and old

subdivisions which still contained some vacant lots. A few, however, were designated for future development.

To summarize current policy, all new urban designations must be located within an urban center (SUDP, RRC, HIC or ASC). With the exception of a limited number of new HICs, new urban centers cannot be established; only expansion of existing centers is possible where justified by population growth and service availability. These isolated urban designated areas will continue to be recognized on the Land Use Policy Diagram by a numerical reference. The detailed property identification and a generic classification of Residential, Commercial or Industrial is presented on a companion diagram entitled "Land Use Designations Outside of Specific Urban Development Plans and Rural Residential Centers."

Because these areas have less than full urban services and are normally surrounded by agricultural or open space lands, the standards for development are much more limited than in an urban center. Minimum parcel size is one acre although larger areas may be required to meet adequate on-site septic and well minimum standards. New development on pre-existing smaller parcels will be permitted only with Health Department approval of adequate sewer and water systems. Specific uses permitted will be subject to limitations of the applicable zoning designation of the property. Building intensity shall not be more than one dwelling unit per acre on Residential property (except for existing subdivisions which meet Health Department standards) and no more than 50 percent lot coverage for Commercial and Industrial property. Building height shall not exceed two stories to provide for fire protection. Population density should not exceed five people per acre.

6. Individual SUDP Policy Discussion

This section of the Land Use Chapter presents a description and discussion of individual SUDPs which have been established to satisfy regionally significant land use goals of the County. While these SUDPs generally enjoy the same entitlement level and policy direction as other SUDPs presented in Section B.2., they are unique as to existing or future land use characteristics and involve major institutional facilities such as a university or regional airport. These SUDPs require additional General Plan policy direction to ensure the implementation of these areas successfully satisfies County and region-wide goals.

a. University Community SUDP

In 1995, ~~t~~The Regents of the University of California ~~have~~ selected a site near Lake Yosemite for the development of the tenth campus of the UC system. This site was ~~is~~ located approximately two and one half miles northeast of the Lake, on property currently controlled by the Virginia Smith Trust (VST) through the Merced County Board of Education. The University ~~has been~~ was offered 2,000 acres for a core

campus and campus-related development (see Figure I-2). This site was selected following a six year search and evaluation process which began with over eighty sites located throughout the Central Valley region of California. The final three sites were evaluated through a program environmental impact report prepared for and certified by the Regents. ~~As of mid 1996, no firm development schedule for the tenth campus has been set by the University.~~

During the site selection process undertaken by the University of California, the Board of Supervisors expressed strong support for the siting of the tenth campus near Lake Yosemite. In 1990, the Board of Supervisors adopted a guidance package which expressed the County's commitment to a cooperative planning process with the University involving the City of Merced, landowners, and the County. The goal of this process is to insure that land uses developed in the vicinity of the campus are complementary to and not in conflict with the mission of the University. Following adoption of the UC Guidance Package, the Board of Supervisors established a UC Campus Study Area Boundary in the General Plan recognizing the importance of coordinating the review of development projects and land use studies in the vicinity of the UC site then under consideration (see the Land Use Policy Diagram).

Adjacent to the Virginia Smith Trust property, is property controlled by the Cyril Smith Trust. This Trust is administered by Wells Fargo Bank. Representatives of the Cyril Smith Trust have also stated to the Regents their commitment to participate in a cooperative land use planning process.

The lands north and east of the Lake Yosemite Regional Park ~~were~~ have been historically designated "Foothill Pasture" which were not considered for urban land use designation or zoning. However, given the decision of the Regents and prior commitments made by the Board of Supervisors, the territory within the Cyril and Virginia Smith Trusts ~~was~~ will be considered for future urban land uses. This area ~~was~~ is designated the University Community SUDP on the Land Use Policy Diagram, recognizing the need for specific urban land use planning and designations in the future.

Recognizing the pressure of speculative development and zoning resulting from the Regents decision, the County adopted policies that urban land use designations within the University Community SUDP should be adopted following a comprehensive cooperative joint planning process involving the University, the City of Merced, landowners and effected urban service providers. Urban land use designations proposed independent of a coordinated planning process ~~were~~ should be discouraged and ~~could~~ may only be considered when determined not to conflict with the development of the University campus. Similarly, lands around the University Community SUDP should remain designated for rural land uses for the foreseeable future. The UC Campus Study Area ~~will~~ served as a boundary for review of discretionary projects for compatibility or possible conflict with the future planning and development of the SUDP area.

The prospective transportation corridors serving the University Community SUDP ~~were~~ have been identified as Bellevue Road to the southwest and La Paloma Road to the northwest. The specific prospective corridor linking the site to State Route 99 to the south ~~was~~ has not been identified. However, alternatives ~~that should be considered~~ were are Lake Road, Kibby Road (extended) and Arboleda Road (extended) which ~~were~~ are shown on the Countywide Circulation Diagram presented in the Circulation Chapter (II) of this General Plan. Future capacities of all transportation corridors which ~~could~~ will potentially serve the University ~~were~~ should be protected.

Following adoption of the University Community SUDP encompassing the Cyril Smith and Virginia Smith properties totaling about 10,300 acres, the County updated the UC Guidance Package describing a multi-step Community Planning process. The initial concept planning phase was concluded in May 1999 with the publication of the University Community Concept Planning Report.

Throughout the campus site selection and the University Community Planning process, the County and the University have undertaken various studies to evaluate the environmental impacts, economic costs and benefits and other planning considerations associated with the development of a new University and its surrounding Community. The County and University have prepared extensive wetland delineations and endangered species surveys as part of planning and in anticipation of the federal permitting process, and, through this ongoing process, the County has come to recognize the necessity of considering the University Community in a regional context, rather than focusing solely on the Lake Yosemite site selected in 1995. In the year 2000, it was determined that the area to the southwest of the original site adjacent to Lake Yosemite was a more appropriate location for the UC Merced campus and University Community. A Draft Comprehensive Alternatives Analysis, published in March 2001, concurred with this assessment, and planning for the UC Merced Campus and University Community was initiated.

As a result of the Comprehensive Alternatives Analysis, the University and County jointly endorsed a shift of the location of the UC Merced campus to the southwest corner of the Virginia Smith Trust lands, on and around the Merced Hills Golf Course. Community development was shifted to lands to the south on properties owned by the Flying "M" Ranch and Hunt Farms. This area was established as the "University Community Planning Area" and subject to the formulation of the Community Plan.

b. Castle SUDP

Castle as a Military Base, and Transition to Civilian Use

The former Castle Air Force Base, located five miles northwest of the City of Merced, was established in 1941 and over a 50-year period grew to serve a highly specialized function in national defense as a base for long-range bombardment, and bomber and air refueling crew training. Over that time, its personnel became a significant sector of the community, with 6,236 active duty military and civilian personnel in 1991, and its

payroll a substantial part of the local economy. The facility covers an area of 2,777 acres with over 200 buildings, a 12,000 foot long runway, and extensive infrastructure.

Congress selected Castle Air Force Base for closure in August, 1991, and military activities were gradually scaled down until final decommissioning and closure in September, 1995. Following announcement of intended base closure, a new agency, the Castle Joint Powers Authority (JPA), was formed by the Cities of Atwater and Merced and the County of Merced to oversee and facilitate economic reuse of the former military installation. The JPA subsequently renamed the former base the Castle Airport Aviation and Development Center.

Most of the former base property is in unincorporated County territory, and a portion is within the City of Atwater municipal boundary. Due to waste and chemical disposal practices by the military which resulted in extensive soil and groundwater contamination, the federal government may maintain ownership of certain areas of the property until remediation is accomplished under the obligations of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The Defense Authorization Act allows the Air Force to convey property by deed before all remedial actions are in place, and some land may be released in this manner. Until property title transfer occurs, the JPA is managing the facility under contract with the federal Department of Defense's Air Force Base Conversion Agency (BCA), in addition to administering leases to individual reuse businesses.

Transfer to Local Land Use Authority

The State Military Base Reuse Authority Act of 1994 describes the process by which cities and counties must assume land use and development approval authority over former military bases, which has resulted in the provisions of the General Plan presented here, and accompanying policies under Goal 12 (Section "C" of this Chapter). While the State directs local government to exercise entitlement discretion within former base boundaries consistent with their respective General Plans and zoning ordinances, the Castle JPA is planned to continue in its role of marketing the facility to draw redevelopment businesses, and review and approval of lease agreements in coordination with local permitting. Atwater is not at this time preparing separate policy. It is expected, however, that the City of Atwater will adopt similar General Plan policy and zoning authority for that portion of the base that is within City limits. The City may, at some point in the future, pursue jurisdiction over the entire Castle site through annexation, recognizing the area is within the City's Sphere of Influence.

Reuse Planning

In February, 1993, in anticipation of the proposed closure of Castle Air Force Base and reversion of territory to local land use control, the County of Merced adopted a Special Planning Zone (SPZ) for the Castle property to protect hitherto unzoned lands from the establishment of incompatible land uses. The SPZ boundary encompasses the Castle

property and is coterminous with its boundary, excluding that portion of the site that is inside the City of Atwater. The existing County SPZ area coincides with the boundary of the new Castle Specific Urban Development Plan (SUDP) area.

In March, 1996, with assistance from staff of the Merced County Planning Department and the Cities of Merced and Atwater, the JPA developed and adopted a Reuse Plan with land use development policies to direct the economic reuse of the facility. Under the Military Base Reuse Authority Act, the County General Plan must support and conform to the adopted Reuse Plan. Therefore, some of these Reuse Plan policies have been incorporated into the County General Plan in order for the General Plan to address fully all geographical and land use development aspects of the unincorporated territory governed by the County, which now includes a large segment of the Castle Airport Aviation and Development Center. Some of these reuse policies have been modified in the General Plan to reflect land use compatibility concerns that the County is obligated to consider, and some new policies not contained in the Reuse Plan have been added to the County General Plan for this purpose also. Lastly, some existing General Plan policies that pertained to former military activities have been deleted from the General Plan. Overall however, the General Plan relies upon the Reuse Plan and refers to its policies for establishing consistency with development proposals at Castle. The Reuse Plan also describes the processes by which development applications will be reviewed and considered.

The JPA's Reuse Plan shall be regarded as the Community Specific Plan (CSP) for this unincorporated urban enclave of the County, similar to other County CSPs. Of all the changes to the General Plan resulting from new realities at Castle, and in recognition of the JPA's Reuse Plan, most changes are found in the General Plan's core development-guiding text, the Land Use Chapter. Other changes were made to policies in supporting General Plan chapters, including Circulation and Noise, as they relate to those issue areas.

The specific zoning tool which will be used to carry-out the direction of the General Plan and Reuse Plan policies is the Special Planning Zone (SPZ) designation. The SPZ will recognize and accommodate the unique mixed-use nature and layout of Castle Airport, and the JPA reuse decision-making that has occurred thus far, while establishing uniform standards and procedures for the regulation of land uses. The County will base issuance of future discretionary approvals upon the General Plan policies described above and contained herein, the Castle Reuse Plan policies and Land Use map, and upon the SPZ code, contained in County Code Title 18.

Coordination Among Agencies

The history and circumstances of development of Castle Air Force Base, its closure by the federal government, and the continuing needs of the surrounding community in the wake of lost government salaries, present unique challenges in promoting viable, long-term reuse of the site. Some of these constraints include soil and groundwater contamination and ongoing remediation, buildings and infrastructure designed without

adherence to state and local codes, facilities constructed for specific uses, such as very large hangars to handle maintenance of bombers and aerial tankers, and a compact, high-density urban core lacking adequate parking, setbacks and buffers.

The Castle infrastructure complex includes roads, sewers, water systems, storm drainage, and aircraft aprons, parking areas, taxi-ways and the runway, all of which presents a continuing heavy maintenance burden which will fall on local agencies once the Department of Defense caretaker agreement expires. Additionally, several local and federal agencies will maintain obligations and interests in Castle for many years to come, requiring creative solutions to different jurisdictional priorities. It has become a regionally significant facility, with a multi-jurisdictional governance established through the JPA to promote full economic reuse. To the extent possible, the County desires to promote cooperation among all parties to achieve new employment and revenue-generating uses while maintaining a high quality of development and reuse at this unique facility. Specific goals and objectives to this end can be found under Section C, beginning with Goal 12, of this Chapter.

The Castle SUDP is in an area within the City of Atwater's Sphere of Influence, as designated by the Local Agency Formation Commission (LAFCO). This designation reflects the important role Castle has played in the City's economy, and their continued interest in annexation of the former base. The County will coordinate with the City in the redevelopment of the facility irrespective of whether the property changes jurisdiction.

7. Land Use Policy Diagram

The Land Use Policy Diagram graphically depicts the basic land use policy of the County in terms of rural and urban designations. This diagram identifies the general location of the urban boundary designations (Specific Urban Development Plans, Rural Residential Centers and Highway Interchange Centers) and the two rural land use designations: "Agricultural" and "Foothill Pasture". Isolated urban designated properties outside of recognized urban boundaries are also identified with a numerical reference correlated with another map showing more precise locations and the specific land use designation (refer to the "Land Use Designations Outside of Specific Urban Development Plans and Rural Residential Centers" Map). One existing special land use is also noted: the Castle Air Force Base is identified as a "Federal Military Installation" in recognition of the multiple uses on this Federally owned property. The specific plan study area for the vicinity of the proposed University of California Campus is also identified.

The purpose of this Land Use Policy Diagram is to reflect the land use designations in rural areas which primarily involves the boundary between the Agricultural designation in the center of the County and the Foothill Pasture on the west and east sides of the

County. The specific land use designations within urban boundaries are reflected on individual maps for each community or urban designated area. The Specific Urban Development Plan or SUDP maps, provide much more detail for a variety of land uses which are more specifically identified. Each of the land use classifications shown on the County Land Use Policy Diagram and in urban boundary maps, are described in this Land Use Chapter.

This diagram and the various urban boundary diagrams serve to establish the land use relationship between the General Plan or Community Specific Plan and all property within the County; however, they are only one aspect of the comprehensive policy framework spelled out in the General Plan text and various policy maps. All Chapters of this Plan, as well as local Community Specific Plans where applicable, must be consulted when making General Plan consistency determinations. As an example, because of the large territory within Merced County, the Land Use Policy Diagram designates the proposed rural land uses for Agricultural or Foothill Pasture. In discussion of these classifications (Section B. 2 of this Chapter) the Plan recognizes multiple compatible uses such as agricultural support operations, recreational areas, and public or institutional facilities when necessary. Other policy maps locate many of these existing and proposed uses and facilities in these rural areas. For a more complete discussion of land uses within the urban boundary designations, refer to Section B. 1 of this Chapter.

C. LAND USE CHAPTER, GOALS, OBJECTIVES, POLICIES AND IMPLEMENTATION

GOAL 1:

A land use pattern which enhances the integrity of both urban and rural areas.

Objective 1. A.:

Compact urban development boundaries which utilize land efficiently and reduce conflicts with agricultural and open space lands.

Policies:

1. Urban development shall occur only within adopted urban boundaries of cities, unincorporated communities and other urban centers consisting of the following designations: Specific Urban Development Plan (SUDP), Rural Residential Center (RRC),

Highway Interchange Center (HIC) and Agricultural Services Center (ASC).

2. Expansion of an existing urban boundary into areas designated for rural land uses shall be allowed only where deemed appropriate based on careful consideration of potential agricultural impacts, on-site limitations for development, public service availability, and impacts on open space or conservation values.

Implementation:

The following criteria is to be applied during review of General Plan Amendment and/or Zone Change applications to expand SUDP, RRC, HIC or ASC boundaries:

1) Soil:

Is the soil suitable for agriculture according to the soil capability?

In general, unique or higher quality soil as identified on the Important Farmland Map of the State Mapping and Monitoring Program, unless verifiable evidence is provided identifying a diminished soil capability.

2) Parcel Size:

Is the present parcel a sufficient size for economic agricultural use?

In general, conforming to the minimum parcel size for the respective zoning classification.

3) Use:

Is the land presently used, or has it been recently used, for agriculture?

In general, for irrigated crop production.

4) Compatibility:

Will a nonagricultural use create conflicts as to compatibility with adjacent or nearby agricultural uses?

5) Services:

Have provisions been made to provide adequate levels of public services to satisfy the demands generated by the proposed development?

6) Limitation:

Will an individual waste disposal system contaminate the surface or groundwater table?

7) Safety:

Will intensive use present hazards to public health, welfare, and safety, as identified in the Safety Chapter (V) of the General Plan?

8) Natural Resources:

Will urban use impact significant open space and/or conservation values as identified in the Open Space/Conservation Chapter (VI) of the General Plan?

9) Land Vacancy:

Is there an adequate supply of available vacant land within the existing urban boundary to accommodate reasonably anticipated or historic growth needs over the next ten (10) years?

10) Consistency:

Is the proposal consistent with the goals and policies of the Community Specific Plan if one has been adopted for the community or area?

For each criterion which raises a concern, the Board of Supervisors must make (a) finding(s) that the value of the project provides an overall benefit to the County that outweighs the issue(s) identified.

Objective 1. B.:

New full-service SUDPs are created which provide an alternative to urban development on productive agricultural lands or to accommodate regionally significant institutional and publicly sponsored land uses.

Policies:

3. New SUDPs shall only be established through adoption of a Community Specific Plan for the territory involved except where the County initiates an SUDP for regionally significant land uses which satisfy specific goals of this Land Use Chapter.
4. Consider establishment of new SUDPs only where the location and size of the community promotes agricultural land conservation, open space for resource conservation, hazards protection and recreation, urban service efficiencies and is determined to be compatible with existing urban areas.
5. The establishment of a new SUDP must provide positive overall economic benefits to the County and include consideration of providing both employment and housing opportunities - including affordable housing for existing County residents.

Implementation:

The County will accept applications for establishment of new SUDPs which meet the following criteria:

- 1) The proposed urban boundary encompasses a minimum area of 320 acres to achieve efficiencies in urban service delivery and provide for long range growth needs.
- 2) To ensure agricultural values are protected, the property should be located off of productive agricultural land as defined in the Agricultural Chapter. In any event, no more than ten percent (10%) of the land area should involve lands classified as "Prime" soil.
- 3) The processing of applications to create the new SUDP shall involve the preparation of an Environmental Impact Report.

If the above criteria are met, the applicant for a new SUDP may then submit a General Plan Amendment Application to include a deposit of funds determined necessary to prepare a Community Specific Plan, and an Environmental Impact Report, and to cover application processing costs. The Community Specific Plan shall include the following at a minimum:

- 1) A fiscal impact component to contain an assessment of projected tax revenues compared to projected County service costs;
- 2) A community facilities/infrastructure component to identify public and private infrastructure needs, service district or assessment area formation details, and a development phasing plan;
- 3) A land use component identifying the various land uses proposed including density and intensity of development, community design parameters, and any special project features;
- 4) A circulation component identifying the relationship to the General Plan Circulation Chapter;
- 5) An assessment of the relationship to goals and objectives of the General Plan Housing Chapter;
- 6) An evaluation of the job/housing relationship of the community identifying where employment centers are located and any proposed phasing of employment generating land uses if they are provided within the SUDP;
- 7) An open space and wildlife component identifying existing and proposed open space values; and,
- 8) An identification of the plan goals, objectives and policies indicating the functional character of the community that is proposed and its relationship to other existing incorporated and unincorporated communities in the region.
- 9) The County may use Area Plans in the context of new SUDPs in order to address regional resource, open space, land use, circulation, infrastructure, or conservation issues.

Objective 1. C.:

An efficient, orderly urban development pattern which minimizes public service costs.

Policies:

6. All new urban development within an SUDP shall connect to existing public sewer and water systems where such systems exist.

7. For SUDPs without urban sewer and water districts, and in RRCs, HICs and ASCs, individual approval of sewer and water treatment and delivery systems shall be required prior to project approval.

Implementation:

At the building permit stage for permitted developments, proof of approved service from a local sewer and/or water district or approval from the County Health Department for on-site systems outside districts shall be required. For discretionary applications, a "can and will serve" letter from the local sewer and/or water district shall be required as part of the application materials. For discretionary applications outside a district, initial clearance for processing must be obtained from the County Health Department for projects utilizing on-site systems. Discretionary applications generally include: general plan amendments, zone changes, conditional use, location and development, tentative subdivision and administrative permit applications.

8. Infilling of development on existing vacant parcels within designated urban boundaries shall be encouraged.

Implementation:

The County will continuously identify and recognize the development potential of vacant parcels within communities. These parcels will be formally recognized when analyzing proposals to reclassify rural lands to urban designations.

9. Recognize "Agricultural" and "Foothill Pasture" designations as the predominant land use designations within the 100 year flood plain as a means to reduce emergency service needs. Ensure that any new urban or rural development permitted within the flood plain is protected from flood hazards.

Implementation:

Development will be subject to the "Flood Damage Prevention" requirements of the County Code.

10. Ensure that public facilities are adequate and available to serve the demands generated by new development.

Implementation:

During the development review process, especially for General Plan Amendments and Zone Change applications, the County will identify any significant impacts to the provision of general public facilities and

services including, but not limited to: fire, sheriff, roads, schools, parks, libraries, social services and courts.

Measures to mitigate impacts from new development on County services and ensure adequate levels of County services may be required consistent with the policies and implementation measures identified under Goal 10 of this Chapter.

Where significant impacts on school facilities are identified, consideration will be given to conditioning the project on formation of a Mello-Roos Community Facilities District or as otherwise authorized by law.

Objective 1. D.:

Pre-existing isolated areas designated for urban land uses are recognized as limited exceptions to the "Urban Centered Concept" of the General Plan.

Policies:

11. Existing properties which were designated "Residential", "Commercial" or "Industrial" prior to the 1989 General Plan revision, will continue to be recognized as legitimate urban designations.
12. Urban land use designations which are located outside an urban center (SUDP, RRC, HIC or ASC) shall not be expanded or redesignated for a more intensive urban land use.

Implementation:

In review of General Plan Amendment and Zone Change applications in these areas, the Board of Supervisors must make a determination that the land use intensity will not increase as a result of the redesignation.

GOAL 2:

A high quality living environment within unincorporated communities.

Objective 2. A.:

Individual community specific plans are adopted for each Specific Urban Development Plan (SUDP) by the year 2000 which recognize local issues, needs and desires.

Policies:

1. Prepare community specific plans for detailed planning of each unincorporated SUDP, which include specific local policies and designate appropriate land uses within SUDP boundaries.
2. Utilize Municipal Advisory Councils within each SUDP to assist the County in identifying local goals and values in preparation and implementation of community specific plans.
3. Periodically update adopted community plans to reflect changing environments within SUDPs.

Implementation:

Consideration shall be given in the County Planning Departments annual work program, to providing resources necessary to prepare and update community specific plans.

Objective 2. B.:

Promote urban land uses at intensities and densities commensurate with the level of public services available in each SUDP.

Policies:

4. The recommended standard for population density and building intensity for all urban land use designations shall conform to the ranges identified in Tables I-3 and I-4 in Section 4.b. of the Land Use Chapter. Individual community specific plans may identify a more specific population density or building intensity standard, however, that standard will fall within these overall General Plan ranges.

Implementation:

Review of proposed population densities and building intensities will occur at the building permit or discretionary review stage for all projects. (Discretionary applications include those listed under implementation of Policy 4 of Objective 1.B. above).

5. SUDPs which lack public sewer and water systems shall be limited to those land use designations and densities which can be accommodated by individual septic systems and wells.

Implementation:

All building permits and discretionary approvals shall be reviewed by the County Health Department for adequacy of on-site wells and

septic systems. (Discretionary applications include those listed under implementation of Policy 7 of Objective 1.C. above).

6. Provide a full range of commercial, residential, industrial and other urban land use designations within SUDPs to accommodate all types and intensities of development commensurate to the availability of public services.

Implementation:

The location and distribution of various land use designations, as identified in Section 4.a. of the Land Use Chapter will be determined during development of and revision to individual community specific plans.

Objective 2. C.:

Urban land uses are appropriately located to avoid incompatible land uses.

Policies:

7. The following land use designations shall be utilized within SUDPs, as appropriate, to provide for a variety of land uses: Very Low, Low, Medium and High Density Residential; Neighborhood and General Commercial; Commercial Transition; ~~and~~ Industrial; and University Community Multiple Use.

Implementation:

In the development of a Community Specific Plan, or during the review of individual General Plan Amendment applications, proposed land use designations will be reviewed for appropriateness based on community and regional needs and compatibility with adjacent land uses. The appropriateness of land uses and associated open spaces may be addressed through use of Area Plans.

8. The Reserve land use category shall identify areas appropriately located for future urban development based on community growth needs and public service availability.

Implementation:

In the development of a community specific plan, consider inclusion of areas which may be applicable for a "Reserve" designation based on future community growth needs. An amendment to convert land

designated "Reserve" to an active urban land use designation shall only occur when adequate provisions have been made for obtaining public services, including community sewer and water, and the current supply of vacant land already designated for development cannot accommodate ten (10) years of historic or reasonably projected growth of the nature proposed with the amendment application (typically residential, commercial, or industrial).

GOAL 3:

Coordinated, orderly development in City Fringe Areas.

Objective 3. A.:

Orderly expansion of urban uses within City planning areas recognizing the City's primary responsibility to determine the type and timing of development.

Policies:

1. In conjunction with the cities, maintain land use controls on all unincorporated lands within the SUDP which reflect agricultural and open space uses until the land becomes qualified for urban use.
2. For all land use proposals within unincorporated City SUDP areas, the City and County will follow any adopted Resolution of Agreement entered into between the County and each respective City.
3. Maintain up-to-date City-County Resolutions of Agreement to reflect current conditions.
4. Consider establishment of a new land use designation for the unincorporated area within a City's SUDP to reflect an "urban reserve" or "urban transition" status.
5. Within City areas designated "Area of Interest" the County will maintain zoning consistent with the Land Use Policy Diagram reflecting agriculture as the predominant land use except in areas with substantial existing development.

Implementation:

For all building permits and discretionary applications in City fringe areas and "Areas of Interest," any applicable City-County Resolution of Agreement will be utilized to guide decision-making. (Discretionary applications include those listed under implementation

of Policy 7, of Objective 1.C. above.) The City-County Agreements will be reviewed and renegotiated from time to time as necessary.

GOAL 4:

Efficient, environmentally sound development within identified Rural Residential Centers (RRCs).

Objective 4. A.:

All suburban non-agricultural housing activity is located within existing designated RRCs.

Policies:

1. No new RRCs shall be established.
2. Expansion of existing RRCs should be avoided by directing new large lot development to vacant areas within existing RRCs.

Implementation:

Applicants proposing to establish a new RRC will be directed to policies in this General Plan providing for establishment of SUDPs. Proposals to expand an RRC will be strictly scrutinized to avoid inefficient densities, public health problems resulting from on-site septic systems, and public service delivery impacts. All General Plan Amendment applications will be reviewed under the criteria identified for urban area expansions (Goal 1, Objective 1. A. of this Chapter). Prior to approval of any RRC expansion, the Board of Supervisors must make findings that the proposed development could not be more appropriately located within an existing RRC or full service SUDP, and another finding that the proposed development would not pose a potential health problem due to individual septic systems.

Objective 4. B.:

Opportunities are provided to accommodate various densities of housing within RRCs.

Policies:

3. Minimum lot size for any residential use utilizing on-site septic facilities shall be one (1) net acre.

Implementation:

At the tentative subdivision map stage and/or prior to issuance of building permits; the County Health Department will review the adequacy of proposed sewage and water systems.

4. Where community sewer and water systems are provided the minimum lot size shall be one-third (1/3) net acre unless a Planned Unit Development (PUD) zone is established which clusters residential dwellings so that permanent recreational, agricultural or other open space area is provided on the balance of the property to serve as a buffer or community amenity.

Implementation:

The County Zoning Code (Title 18) shall allow within the A-R (Agricultural-Residential) zone, one-third (1/3) net acre minimum lots or utilization of PUD zoning involving smaller lots or multiple family housing at three units per gross acre overall density where community sewer and water systems are provided meeting the requirements of the Regional Water Quality Control Board, and/or the County Health Department, whichever are more stringent. The water system must also satisfy County Fire Department requirements for fire suppression. All subdivision applications containing lots smaller than one acre shall include an environmental study which addresses, at a minimum, groundwater needs and traffic generation impacts.

5. Maintain a rural character in rural residential centers by allowing a limited amount of agricultural and animal husbandry activities.

Implementation:

The County Zoning Code (Title 18) shall provide for appropriate agricultural and animal husbandry activities within accepted limits of the County Health Department.

6. With the exception of "combining" designations for institutional or recreational uses, the "Agricultural Residential" land use designation will be utilized to accommodate subdivision and development activities within RRCs.

GOAL 5:

Sufficient opportunity exists to accommodate the specialized needs of the traveling public balanced with circulation and other County needs.

Objective 5. A.:

HICs located and developed to serve the traveling public with consideration of adequate traffic capacity, safety and maintenance of scenic characteristics.

Policies:

1. HICs may be considered for establishment at existing and programmed interchanges of state highways not abutting Specific Urban Development Plans (SUDPs). Programmed interchanges are those funded in the State Transportation Improvement Program (STIP).
2. Non-Highway oriented commercial as well as industrial and residential land uses should be directed to established SUDPs rather than HICs.

Implementation:

All development proposals within HICs and proposals to establish new HICs will be initially reviewed for the existing highway access condition and the suitability of the use proposed.

3. Redesignating lands from rural to urban land use must be accomplished by General Plan Amendment in conformance with criteria outlined in Policy 2 of Goal 1, and other suitability factors. All land identified for development shall be designated "HIC Commercial" on the Land Use Policy Diagram which provides for highway oriented commercial activities.
4. All development within an HIC shall be reviewed for design characteristics which include, but are not limited to: landscape plans, signage, building height and bulk, etc.

Implementation:

Application for the establishment, expansion or development of an HIC shall involve a Conditional Use or Planned Unit Development (PUD) Application. All General Plan Amendments and/or Zone Change applications must also be accompanied by a specific development application. All applications shall be subject to the criteria listed in implementation of Policy 2, under Objective 1.A. of this Chapter. Other factors that shall be considered for all applications in conjunction with these criteria include: topographic suitability; proximity to an SUDP; availability of public services; accessibility; traffic and access safety; capacity (level of service) of access

roadways and interchanges. This criteria shall also be used by Planning staff to review all current HICs for possible area reduction. In addition to the above criteria, each specific development application will be reviewed for its visual design characteristics.

Objective 5. B.:

Highway commercial areas protected from speculative and premature development activities.

Policies:

5. Agricultural land use designations within and adjacent to HICs may be employed as a means for maintaining traffic capacity and safety, scenic characteristics and aesthetic goals until such time that viable projects are submitted.
6. When a project is not developed in a timely manner after approval, the County may initiate the process to revert the land use and zoning to their original designation.

Implementation:

A timely manner for project development within HICs shall be 3 years or as dictated by Zone Code requirements for specific applications.

Objective 5. C.:

HICs do not significantly impact County services.

Policies:

7. An HIC shall not be developed unless it can be demonstrated that sufficient public services are available.
8. Development approval shall include mechanisms to ensure adequate infrastructure construction and maintenance.

Implementation:

A complete CUP or PUD application shall include a "can and will serve" letter from appropriate urban service districts where they exist. The applications shall also include provisions for ensuring adequate infrastructure is provided and maintained. The applicant shall obtain the approval of County Departments for adequacy of proposed improvements which include, but are not limited to, the Fire, Sheriff, Health and Public Works Departments.

GOAL 6:

The daily commercial and service needs of rural populations are served by Agricultural Services Centers (ASC).

Objective 6. A.:

ASCs are appropriately located to satisfy the convenience commercial and service needs of rural areas.

Policies:

1. The County should consider redesignating some of the smaller Specific Urban Development Plan areas (SUDPs) as ASCs to promote development which supports agricultural areas.
2. Land use activities within ASCs should be limited to those which involve agricultural services, farm support operations and convenience commercial stores for the rural population.

Implementation:

The County will develop an ASC zoning designation for incorporation into the Zoning Code (Title 18 of the Merced County Code) listing appropriate permitted, administrative and conditional uses, as well as building and parcel standards. Once this is accomplished, General Plan Amendment and Parallel Zone Change Applications may be initiated for specific SUDPs which are determined appropriate candidates for ASCs.

3. Housing densities are limited to one unit per acre because of the lack of urban services, and should be provided only for those employed or owning land within the ASC and the surrounding area.

Implementation:

A determination as to parcel size and appropriate ownership will be made during the Tentative Subdivision application process.

4. With the exception of "combining" designations for institutional or recreational uses, the appropriate land use designations within an ASC are "Agricultural Residential" for residential uses, "General Commercial" for convenience commercial and agricultural support operations and "Industrial" for agricultural-industrial and service uses.

Implementation:

The appropriate land use designation for a specific property will be determined based on existing use and other criteria during the General Plan Amendment Application stage.

GOAL 7:

Conservation of productive agricultural and other valuable open space lands.

Objective 7. A.:

Conversion of productive agricultural and other valuable rural land to urban uses is minimized.

Policies:

1. Conversion of agricultural and other rural land into urban uses shall only be allowed where a clear and immediate need can be demonstrated based on anticipated growth and availability of public services and facilities. For proposals to expand an existing community into rural lands the available vacant land inventory within the urban boundary shall also be considered.
2. Direct urban uses to less valuable farmland when conversion is justified.

Implementation:

This policy will be implemented through analysis of the criteria listed under Policy 2, Objective 1. A., of the Land Use Chapter. It will be the responsibility of the Board of Supervisors to consider findings relating to the criteria. Prior to approving a boundary expansion, the Board must determine, based on evidence in the record, that the benefits of the proposed conversion of agricultural or open space land outweigh the impacts of the conversion.

In association with growth where productive agricultural land or other valuable rural land is converted to urban uses, the County may use Area Plans in order to address regional resource, agricultural preservation, and conservation issues.

3. Premature and uncoordinated division of land which forces the early cessation of valid agricultural uses shall be avoided.

Implementation:

All rural Tentative Subdivision Map Applications will be reviewed for their effect on existing agricultural activities.

GOAL 8:

A rural environment which achieves a balance between its agricultural and other open space resource values.

Objective 8. A.:

Rural areas are appropriately designated to meet the agricultural, grazing, wildlife habitat, recreational, natural resource and other open space needs of the County.

Policies:

1. Recognize the importance of the various open space resources identified in the Open Space/Conservation Chapter as legitimate land uses in rural areas.
2. The "Agricultural" land use designation shall be utilized for non-urban lands which are recognized for their agricultural productivity as well as other open space values including recreation and wildlife.
3. The "Foothill Pasture" land use designation shall be utilized for non-urban lands which are recognized for their open space value as hilly grazing and cropland or as wildlife habitat or recreational areas.

Implementation:

In review of General Plan Amendments for designating Agricultural and Foothill Pasture lands, recognize the various agricultural and other rural open space values as important considerations.

Objective 8. B.:

Special land uses are properly located in rural areas.

Policies:

4. Allow consideration in rural areas of special agricultural commercial uses, which are directly related to and are a part of an agricultural enterprise or operation.
5. Allow consideration of locating characteristically specific commercial and industrial uses in rural areas in limited cases based on the unique nature of the use and for health and safety reasons, which require location on large land parcels or in sparsely populated areas.

Implementation:

The County will consider and apply the following criteria during the Conditional Use Permit review process:

- a) The use requires location in a rural area because of one or more of the following characteristics: unusual site area requirements, natural resource production purposes, the use is directly agricultural related, or because of specific operational characteristics which pose a health or safety problem to urban populations.
 - b) The use is located near or readily accessible to a probable work force.
 - c) The use is consistent with the intent and policies of the Agricultural, Open Space/Conservation and Safety Chapters.
 - d) The use will not significantly impact adjacent agricultural , recreational, natural, cultural, wildlife or other identified open space land use.
 - e) The use is protected from hazards identified in the Safety Chapter.
 - f) The use is not located on productive agricultural land when non-productive agricultural land is available in the vicinity of the proposed project.
 - g) The use is limited in size, time of operation or length of permit authority where necessary to ensure compatibility with adjacent land uses.
 - h) The use shall not have a detrimental effect on surface or groundwater resources.
 - I) The use shall provide adequate infrastructure and improvements to reduce impacts on County services.
 - j) The use shall have access to adequate transportation facilities without creating abnormally high traffic volumes and shall provide road improvements to mitigate impacts generated by the project.
6. The recommended standard for population density and building intensity for land uses in the "Agricultural" and "Foothill Pasture"

designated areas shall conform to the ranges presented in Section 3.b. of the Land Use Chapter.

Implementation:

Review of proposed population densities and building intensities will occur at the building permit or discretionary review stage for all projects. (Discretionary applications include those listed under implementation of Policy 7 of Objective 1.C. above).

GOAL 9:

Accommodation of public land uses and private facilities which satisfy specific County needs.

Objective 9. A.:

Recreational areas, institutional and public facilities, hazardous and non-hazardous waste facilities, power and communication towers and airports are appropriately located to minimize land use conflicts while satisfying local or regional demands.

Policies:

1. Ensure that adequate local and regional park facilities are available to serve the growing County population.
2. Public recreational areas may be designated "Recreational" on individual urban boundary diagrams; otherwise these areas may be identified by a combining designation through the symbol "R" over the base land use designation on the Land Use Policy Diagram.

Implementation:

New County park locations and improvements to existing parks will be achieved through the implementation of "Local Recreational Park Land Space and/or Fee Obligation Ordinance"

3. Public institutions and facilities should be efficiently located to provide the greatest level of service delivery while minimizing both public costs and impacts on adjacent properties.
4. Public facilities and institutional land uses may be designated "Institutional" on individual urban boundary diagrams.

Implementation:

Consideration of the appropriateness of a proposed institutional facility will occur during the development review process (generally a Conditional Use Application). The criteria listed under implementation of Policies 4 and 5 for Objective 8. B. of this Chapter shall be applied for proposed institutional facilities in rural areas. A finding will also be required that the institutional use is necessary at the proposed location in order to satisfy local or regional needs.

5. Provide an adequate amount of landfill capacity to accommodate the projected non-hazardous solid waste needs of the County.
6. Landfills should be properly located to avoid health and safety risks, while ensuring that future adjacent land uses do not restrict landfill operations.
7. Existing operational and proposed County landfills shall be identified by a combining designation "L" on the Land Use Policy Diagram.

Implementation:

The County will utilize the "Merced County Solid Waste Management Plan" and review during the County Capital Improvement Program to determine the adequacy of landfill capacity and proposals to expand or establish new landfill sites.

8. Hazardous waste transfer, treatment and repository sites must conform to the Merced County Hazardous Waste Management Plan. Such sites may be identified by a combining designation "H" on the Land Use Policy Diagram or on individual urban center diagrams.

Implementation:

Review of proposed hazardous waste sites for conformance with the Hazardous Waste Management Plan will occur during the development review process (generally Conditional Use Application).

9. Recognize the importance of public airports and the Castle Airport - Aviation and Development Center by encouraging only compatible land uses in areas subject to safety or noise impacts from these facilities.
10. The unique status of Castle Airport and Aviation Development Center will be recognized for its capacity for air cargo and transit service in addition to accommodating General Aviation and shall be designated as the "Castle SUDP" on the Land Use Policy Diagram.

Implementation:

Building permits and discretionary applications in identified areas subject to safety or noise impacts from public airports will be reviewed for compatibility with consideration of the Merced County Airport Land Use Commission Policy Plan or other adopted ALUC Plan. (Discretionary applications include those listed under implementation of Policy 7, of Objective 1.C. above.)

11. Avoid locating private airstrips where they conflict with municipal airports and discourage airstrips which do not support agricultural commercial operations such as cropdusting activities.

Implementation:

The appropriateness of private airstrips will be reviewed during the Conditional Use Application process.

12. Structures which could impact air travel shall be reviewed for possible impacts.

Implementation:

All proposed radio, television, power or related transmission towers and lines shall be reviewed for appropriate location and possible air travel conflicts during the Conditional Use Application process. All applications will be referred to the Merced County Airport Land Use Commission for comment.

GOAL 10:

County services and facilities provided at adequate levels for existing and future residents.

Objective 10. A.:

Minimum acceptable levels of County services and facilities such as sheriff and fire protection, roads, parks, libraries, social services, and courts are available to serve existing County needs through the year 2000.

Policies:

1. The County will determine the acceptable minimum level for the efficient delivery and funding of essential County services.

Implementation:

Through preparation of special studies and other ongoing efforts, the County will identify minimum acceptable levels of service for various County Departments and functions. Capital Improvement Plans and similar budgeting mechanisms will be adopted by affected County departments to identify and finance service and facility needs. The County will pursue all appropriate measures to secure necessary funding to achieve and maintain the provision of adequate services, possibly including such measures as increasing the sales tax, issuing general obligation bonds, forming benefit assessment districts and seeking additional funding from State and Federal sources.

Objective 10. B.:

County services and facilities are not reduced below minimum acceptable levels as a result of new development.

Policies:

2. Ensure that new development does not erode current levels of County service.
3. Identify the need for expanded County services and additional facilities resulting from new development and determine acceptable means to ensure those needs are satisfied.

Implementation:

The County will identify the impacts on County services and facilities caused by new development on both a cumulative and project level basis. Based on identified impacts and the County's established facilities needs through Capital Improvement Plans and similar mechanisms, development impact fees may be collected, to include at a minimum: fire and sheriff stations and equipment, road improvements, parks, libraries and court facilities. Other possible sources of funding the ongoing staffing and maintenance costs of these facilities will be investigated including such sources as special benefit assessment districts, Mello-Roos or Marks-Roos community facility districts, and development agreements.

GOAL 11:

Accommodate the tenth University of California Campus and orderly development of adjacent land uses through a comprehensive planning and permitting process at the Federal, State and Local levels.

Objective 11.A.:

Land use designations supporting ~~a the~~ University at the site selected by the University of California Regents in 1995 are identified for ~~that the~~ Campus site and adjacent lands in a coordinated and organized manner involving landowners, the City of Merced, University of California, and the Merced Irrigation District.

Policies:

1. The boundaries of the Virginia Smith Trust and Cyril Smith Trust properties ~~have been shall be~~ identified as "the University Community SUDP" shall be identified to encompass the 910 acre UC Merced development area as identified in the Campus Long Range Development Plan (LRDP) and the approximately 2,133 acre area south of the Campus currently owned by the University Community Development Company and Hunt Farms. This area is generally bounded by Lake Road to the west, the Fairfield and Le Grand Canals to the east and Yosemite Avenue to the south. Lands within this boundary have been shall be designated "University Community Urban Reserve" until designated for specific urban uses.
2. Development within the University Community shall be subject to the policies set forth in the University Community Plan (UCP).
3. The "UC Community Plan Area of Interest" ~~Campus Study Area~~ boundary on the Land Use Policy Diagram is ~~has been~~ designated to serve as a broader area of analysis and evaluation ~~during the interim University Community planning process.~~

Implementation:

~~If this site is ratified, or another site is selected, in the Section 404/ESA permitting review, the County will prepare a Specific Plan or Area Plan for the University Community SUDP which will provide land use and development policies for the area and contain specific land use and zoning designations. A planning team will be formed for this effort involving representatives from Merced County, the University of California, City of Merced, landowners and Merced Irrigation District.~~

~~The County will prepare a specific plan or area plan for the University Community SUDP which will provide land use and development policies for the area and contain specific land use and zoning designations. A planning team will be formed for this effort involving representatives from Merced County, the University of California, City of Merced, landowners and Merced Irrigation District.~~

Objective 11.B.:

Speculative development projects, re-zonings and General Plan Amendments determined to be detrimental to a coordinated development process for the University Community Plan are discouraged.

Policies:

3. Zoning within the University Community Plan SUDP shall remain agricultural until zoned for planned for urban use through adoption of Specific Plans a General Plan Amendment.
4. General Plan Amendments, re-zonings and development projects within the University Community Plan Area of Interest UC Campus Study Area and along possible access routes, shall be denied if determined to be detrimental to the coordinated orderly development of the University Community SUDP.

Implementation:

~~Within the UC Campus Study University Community Plan Area of Interest boundary which includes the University Community SUDP, the County shall work with landowners, the City of Merced, the University of California, Merced Irrigation District and other interested parties to prepare an Area Plan to address development and Public Service issues in the vicinity of the Campus and Community. Prior to the adoption of the Area Plan, the Planning Director shall review all applications for discretionary approvals within the University Community Plan Area of Interest. If the Planning Director determines that approval of the application could adversely affect the coordinated development planning process of the University Community ~~SUDP~~, the Planning Director shall refer the application to the Planning Commission. If the Commission concurs that the proposal could adversely affect a coordinated development process planning effort, it shall recommend to the Board of Supervisors that the application be denied or referred to staff with direction to either not process the application, or to work with the applicant to attempt to modify the application to address specific issues.~~

Objective 11.C.:

Access routes serving the University and adjacent land uses are appropriately classified to ensure adequate capacity.

Policies:

5. Identification of all major access routes serving the University Community ~~SUDP~~ shall occur through the University Community Plan and the Campus Parkway Plan. ~~be included in all SUDP planning efforts, and appropriate amendments to the Circulation Chapter will classify these routes according to their proper function.~~
6. Development projects along possible access routes shall be located and designated in a manner which preserves the future capacity and aesthetics of the route to adequately serve the University Community ~~SUDP~~.

Implementation:

All applications for discretionary and non-discretionary projects located along possible access routes to the University Community ~~SUDP~~ will be reviewed for proposed building setbacks from existing and possible future rights-of-way. Consideration will be given to regional transportation planning efforts through [the County](#), MCAAG, City of Merced Circulation Element amendments and other studies conducted by public agencies. Where a conflict is identified, all buildings should be set back further from the right of way, or application processing should be suspended until completion of [applicable the—University Community](#) transportation studies.

Objective 11D: [The location of the University Community will be subject to ratification or modification through the Section 404/Endangered Species Act permitting process. The County will apply to Federal and State regulatory agencies for permits to implement General Plan policies related to open space, agricultural preservation, and the University Community.](#)

Policy: [Objective 11A, premised on the 1995 campus site selection, does not foreclose the County as land use authority and Federal and State permit recipient from accommodating the University and its surrounding University Community at an alternative location in eastern Merced County.](#)

Implementation:

[The University Community planning process will comply with CEQA and applicable Federal and State permit requirements. The planning, CEQA compliance and permitting processes shall be coordinated through the use of programmatic and subsequent tiered environmental documents, as appropriate.](#)

GOAL 12:

Long term economic and social benefits, such as employment, are maximized through the reuse of the former Castle Air Force Base.

Objective 12A:

Accomplish full economic reuse of the Castle property.

Policies:

1. Promote the Joint Powers Authority's reuse efforts in coordination with County economic development efforts.

2. Coordinate planning functions at Castle with the JPA economic development activities, in cooperation with the Cities of Atwater and Merced, and various other economic development entities which are promoting revenue and employment-generating businesses.

Objective 12.B:

Appropriately located land uses minimize conflicts and maximize reuse opportunities.

Policies:

3. Utilize the Castle AFB Reuse Plan adopted by the JPA as the local Community Specific Plan for this unincorporated County urban area.
4. During review of individual projects, ensure consistency with the Reuse Plan, map and policies.
5. Development applications submitted to the County shall be referred to the City of Atwater, Merced Irrigation District, or other appropriate agencies for comment.
6. In order that reuse activities will not compromise long-term toxic clean-up programs at Castle, for leases that have not undergone a Finding of Suitability of Lease, reuse and planning activities, particularly new development, shall be coordinated with the Air Force Base Conversion Agency.

Objective 12.C:

Adequate urban facilities are developed and maintained.

Policies:

7. Sewer, water and drainage facilities shall be available for all reuse activities.

Implementation:

Proponent must provide a "Can and Will Serve" letter or other documentation from appropriate agencies demonstrating sewer capacity, water service commitments, and identification of appropriate storm drainage disposal measures, prior to issuance of

building permits or acceptance of applications for discretionary projects. A long-term fiscal plan for maintenance and construction of capital facilities should be prepared by the JPA with County and City assistance.

8. Ensure development/reuse activity contributes its fair share for capital improvements.

Implementation:

Encourage the JPA, with cooperation from the County of Merced and City of Atwater, to utilize assessment districts, bridge and major thoroughfare zones of benefit, and/or other financing tools, based on local traffic and other infrastructure impact studies to ensure reuse activities contribute their fair share for new and upgraded infrastructure.

9. The County will work with the JPA and City of Atwater to cooperatively provide adequate public safety services, and develop a mechanism to ensure proper financial resources are allocated for fire protection and sheriff patrol.

Implementation:

Prior to sunset of the Air Force caretaker agreement for Castle, a tax/revenue sharing agreement shall be developed, or some other mechanism established, for the provision of public safety services at Castle.

Objective 12.D:

Streamlined application procedures are implemented to minimize project approval timeliness.

Policies:

10. Development applications and plot plans will be accepted for review by the County after the JPA has indicated that it will consider leases for such reuses.
11. County staff will work with JPA staff proactively to achieve application processing timeliness coordinated with the JPA lease issuance process.

Implementation:

Utilize the Castle Reuse Plan, "Plan Implementation," section for permit application review and processing procedures, in combination with SPZ zoning provisions of the County Code.

12. All reuse activities are in conformance with the California Environmental Quality Act.

Implementation:

Environmental review (CEQA compliance) shall assume full military operations as they were in effect at the time of peak base use in September 1990 as the baseline environmental setting when determining impact thresholds for reuse activities, consistent with State law, the Air Force base closure EIS, and the JPA's Reuse Plan EIR. Projects which exceed this threshold will be subject to further review under CEQA prior to approval by the County.

Objective 12.E:

Achieve flexibility among reuse alternatives while ensuring compatibility of uses and a common order within Castle and the regional setting.

Policies:

13. Preserve the utility and full civilian use of Castle Airport.
14. Development standards shall be flexible in consideration of historic mixed-use development patterns as a military base.

Implementation:

Text for the Special Planning Zone (SPZ) designation shall be drafted specific to the needs of Castle, respecting the site's military background, and shall be presented to both the County and JPA Board for adoption.

CIRCULATION

A. INTRODUCTION/PURPOSE

Merced County adopted its first Circulation Element in 1978. Current state law requires a circulation element to include:

"the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals and other local public utilities and facilities, all correlated with the land use element of the General Plan" (Government Code Section 65302(b)).

The purpose of this Circulation Chapter of the General Plan is to develop a plan to provide for the movement of people, goods, energy, water, effluent, storm water and communications to accommodate anticipated land use activities throughout the County. The reader will find that the Circulation Chapter covers many issues which are related to other chapters of the General Plan which affect physical development of the County, including the Land Use, Housing, Open Space, Noise and Safety Chapters.

The Circulation Chapter is divided into three sections which address automobile transportation and the road system, alternative modes of transportation (public transit, rail, air and bicycle routes), and other infrastructure issues (water, sewer, gas, storm drainage facilities, etc.)

B. CIRCULATION CHAPTER ISSUES**1. Automobile Transportation****a. Automobile Transportation and the Road System**

Automobile transportation is a basic part of our everyday life as it provides us with freedom and mobility. Automobile access to roads, or the lack thereof, has been and will continue to be a major influence in the location and intensity of different land use activities. Roads serve different purposes for various land uses. For example, roads are a means to distribute products and provide access for employees in industrial and commercial employment centers, whereas a simple cul-de-sac in a residential neighborhood is used by residents to reach connecting streets, providing access to shopping and other activities. As a result of these various trip purposes, roads are designed, constructed and maintained differently.

In order to correlate the Land Use and Circulation Chapters, Merced County has generated a traffic study report for the year 2000. (The Traffic Study Report is in the Technical Appendices of the General Plan and is incorporated herein by reference.) The Traffic Study Report suggests various road improvements to provide an acceptable level of service for continued development and growth through the next 10 years or so. It is important to note that the suggested road improvements from the Traffic Study Report are a result of studying various factors such as historical and projected growth, existing and anticipated land use activities which would occur as shown on the Land Use Policy Diagram, existing road improvements and traffic volumes, regional influences, and more.

Automobile and truck transportation will continue to be the primary mover of people and commodities through the year 2000. Therefore, as population growth and traffic increase, it will be vitally important to the County's economic health to properly improve and maintain its circulation system.

This section of the Circulation Chapter is further divided into subsections on developing a functional road system, improving and maintaining the road system, and providing adequate access to the roads.

b. Developing a Functional Road System

Merced County contains a variety of roads which have different characteristics. Some roads are two-lane dirt roads which serve rural areas, other roads have four-lanes and serve urban areas with much higher traffic volumes. All different types of roads serve two primary functions - to provide access to individual parcels, and to accommodate the movement of goods, services and people. The relative importance given to either of these two functions helps determine the purpose and designation of a road, and ultimately results in determining the standards of design and construction. In architecture, the term "functional design" is used to indicate that a building is designed to accommodate the different activities which will occur within its walls. This is similar for the road system. The design characteristics of different roads and their relationship to one another is based upon their capacity to serve the functions of access and movement. For example, a two-lane "local" road is generally designed to provide direct access to abutting parcels and is characterized by lower traffic volumes and speeds. In contrast, a four-lane "freeway" is designed to carry large traffic volumes at high speeds for longer distances. As a result, access points to "local" roads are not controlled as much as access points to "freeways." Table II-1 shows the functional road classification system for Merced County and their respective characteristics.

TABLE II-1

THE FOLLOWING TABLE PRESENTS THE DIFFERENT FUNCTIONAL ROAD CLASSIFICATIONS FOR MERCED COUNTY AND THEIR RESPECTIVE CHARACTERISTICS:

<u>Road Type</u>	<u>Typical Right-of-Way Range</u>	<u>Typical Access Controls</u>	<u>Typical Intervals Distances</u>	<u>Typical Speeds</u>	<u>Typical Traffic Volumes</u>	<u>Other Design Features</u>
Local Roads	50' - 70'	Direct access ¹ generally allowed but controlled in exceptional circumstances	0 - ½ mi. in urban areas, larger intervals in rural areas	5 - 30 mph in urban areas and higher speeds in rural areas	0 - 3000 ADT ²	Designed to prevent through traffic in residential areas
Minor Collectors	50' - 80'	Direct access ¹ generally allowed but should be minimized	1/4 - 3/4 mi. in urban areas, larger intervals in rural areas	20 - 40 mph in urban areas and highway speeds in rural areas	2,800 - 10,000 ADT	Collects traffic from local roads and connects with roads which carry higher volumes of traffic at greater speeds
Major Collectors	50' - 100'	Direct access ^{1,3} points generally allowed but at greater intervals shared access should be encouraged	3/4 - 2 mi. in urban areas, larger intervals in rural areas	30 - 50 mph in urban areas, possibly higher in rural areas	3,800 - 20,000 ADT	Similar to minor collectors but vehicle trips are typically longer distances. On-street parking is generally undesirable
Arterials	80' - 120'	Controlled ^{1,3} access for new subdivisions. Shared access shall be encouraged	1 - 3 mi. intervals in urban areas, larger intervals in rural areas	35 - 55 mph in urban and rural areas	9,600 - 40,000	Similar to major collector but vehicle trips are typically longer distances. Frontage roads should be considered, on-street parking is undesirable
Freeways	120' +	Fully controlled access	As determined by CALTRANS	55 + mph	15,000 - 90,000	Frontage roads are necessary to direct traffic to access points. Emergency parking only

1. Direct access points should be from roads which are designed for access, not movement; i.e. first to local roads, then minor collector roads, and so on.
2. Average Daily Trips
3. Left turn movements from specific projects may be prohibited.

Using the functional classification system as a template, the County has designated various roads to accommodate traffic movement through the next decade. Together, the Countywide Circulation diagram and individual Specific Urban Development Plan (SUDP), and Rural Residential Center (RRC) maps make up the official Road Circulation Plan for Merced County. All major thoroughfares not shown on the Countywide Circulation diagram are identified in SUDP or RRC maps (which are included in the Appendix to this Chapter). These major thoroughfares include: minor collectors, major collectors, arterials and freeways. All other roads are considered local roads.

It is important to note that the diagram and maps indicate roads necessary to accommodate future land uses designated in the land use diagrams and may not reflect existing conditions. Rather, these reflect an end-state condition which the County will strive to achieve up to and beyond the year 2000. Unanticipated future land use activity can also change the function of a road and adjustments may need to be made to reflect future conditions.

In Merced County, the actual design and construction of a road is administered by either the Merced County Department of Public Works or CALTRANS (for State Highways). In rare instances, private roads may be constructed which may not meet the design and construction requirements of the County or State. Private roads typically function as local roads by providing direct access to adjacent properties.

c. Obtaining and Maintaining the Road System

Growth presents a unique set of circumstances the County of Merced must consider, specifically as it relates to obtaining necessary road improvements and continuing maintenance. With new development comes additional traffic, which then places additional demands upon the existing road system. Different land use activities will place various demands on the road system. For example, land uses which rely on trucking in rural areas may cause rapid structural deterioration of roads, whereas residential, commercial and industrial projects in urban areas will likely generate higher traffic volumes. It will be important to maintain an acceptable level of service along roadways as growth continues.

In previous years, the County obtained road rights-of-way from subdivisions in rural areas, but rarely required road improvements. In urban areas, the County would obtain on-site road improvements and rights-of-way for subdivisions which created five or more lots (major subdivisions); many times the road improvements for other discretionary projects would be deferred to an indefinite time for various reasons. Almost always, off-site improvements would be constructed by the County, e.g., traffic signals, new road alignments, etc. More recently, the County has placed conditions on individual development projects to provide off-site road improvements to maintain acceptable road conditions in rural and urban areas. This reliance on private assistance is the result of the County's mounting fiscal problems.

A brief overview of the road funding dilemma which the County faces is presented below.

In 1988, the County of Merced was responsible for the maintenance and improvement of approximately 1,780 miles of road and numerous bridges. As stated previously, CALTRANS is responsible for improving and maintaining all State Highways. The County's current revenue sources for road maintenance and improvements include gas taxes, fines and forfeitures and other miscellaneous sources. Both the County and State are experiencing a major shortfall of funds to properly maintain and operate the road system. Faced with increasing growth pressures locally and Statewide, these traditional methods of funding are not adequate to meet anticipated demands for such improvements as road widening, turn lanes, traffic signals, drainage projects, full interchanges at freeways, and so on. This funding dilemma is expounded in more detail in the Traffic Study Report included in the Technical Appendix of the Merced County General Plan, and in The 1988 Regional Transportation Improvement Plan, prepared by the Merced County Association of Governments (MCAG).

The current funding situation is not expected to improve during the next ten years. It is clear that the County will be unable to fund road improvements which have been suggested in the Traffic Study Report utilizing traditional sources of revenue. Therefore, the cost of most road improvements necessary to serve growth to the year 2000 must be equitably distributed to new development in urban and rural areas. Otherwise, when adequate road improvements are not available, development in certain locations may not be possible unless other sources of funding are established.

The Traffic Study Report in the Technical Appendices provides estimated costs of the necessary road improvements in various planning areas of the County. Using this as a template, the County should consider collecting a user impact fee to pay for these road improvement costs. This is one possible method to equitably distribute road improvement costs, because they are spread over a larger area. Other options include formation of improvement districts or other community wide funding sources. The County should continue to explore these and other methods to collect money for the needed road improvements.

The primary method used by the County to determine road impacts from projected growth is to identify the existing and resulting Level-of-Service (LOS) of roadways during the peak period of traffic volume. The concept of levels-of-service are determined, can be found in the Highway Capacity Manual, Special Report 209, published by the Transportation Research Board. Occasionally, the Transportation Research Board publishes interim special reports with revised capacity procedures that are to be incorporated in future revisions of the Highway Capacity Manual; the procedure contained in these interim reports should be followed until the Highway Capacity Manual has been revised.

In general, six levels-of-service are defined for various components of roadways. They are given letter designations, from "A" to "F", with LOS "A" representing the best operating conditions and LOS "F" the worst. LOS "A" and "B" represent free-flow traffic with few delays. LOS "F" describes a fully congested situation where traffic is deadlocked. LOS "C" is generally accepted as a satisfactory traffic flow during periods of peak volume within rural areas. However, as a result of the increased tolerance level of motorists in urban areas as well as the high cost of obtaining LOS "C" or better, LOS "D" is adopted in many jurisdictions as acceptable during peak periods of traffic flow within urban areas.

LOS "C" has been identified in Merced County as the acceptable peak period level-of-service for roadways located within rural areas of the County. LOS "D" has been identified in Merced County to be the acceptable peak period level-of-service for roadways located within HICs, SUDPs of unincorporated areas and RRCs. There may be some roadways lying between urban growth areas where LOS "D" will also be considered acceptable; one example may include Santa Fe Drive between the Winton SUDP and the City of Atwater. The acceptable level-of-service for roadways within the SUDP of an incorporated city shall be as stipulated in the Circulation Chapter of the respective city general plan.

Level-of-service should not be the only consideration when deciding what improvements are necessary to mitigate impacts of growth. Each situation should be examined on its own merits. If improving the level-of-service for a minor component of the circulation system (such as a left turn movement from a local roadway), then the poor level-of-service for the minor component should be tolerated. Low volume movements at an intersection that may experience LOS "E" or worse should be considered to be acceptable if a high-volume through movement would be significantly compromised in the process of correcting the level-of-service of the minor low-volume movement. If a level-of-service worse than "E" occurs on a low-volume movement of a high volume intersection, consideration should be given to restricting that movement from occurring. An example of such a restriction would be to construct a physical barrier, such as a raised center median, to eliminate turning movements or crossing maneuvers at an intersection.

The County is also concerned about maintaining future road rights-of-way free from the development of structures. The construction of buildings and other miscellaneous structures can increase the actual costs of purchasing the right-of-way in the future. It can also cause a major disruption in the operations of on-site activities, i.e., building relocation. Therefore, it is important to ensure new development is properly located outside road rights-of-way.

d. Providing Adequate Access

Adequate access to the public road system from private property is critical to ensure emergency vehicle access. There are two methods of providing access to publicly maintained roads: direct or indirect. Direct access is where a parcel is adjacent to a publicly maintained road and an individual driveway provides access. Indirect

access is where a person must drive across other private parcels, usually along a private access easement, to reach a publicly maintained road.

Direct access points are regulated for two major reasons; they can greatly reduce traffic flow, and they can cause deterioration of the paved edges and shoulders of a public road. Direct access points to public roads are currently regulated by the Merced County Department of Public Works (along County maintained roads) and by CALTRANS (along State Highways) through issuance of "encroachment permits." Indirect points of access, are not directly controlled. However, the County and State control the point at which indirect access roads intersect with public streets through issuance of encroachment permits. Private roads are also a form of indirect access, and, if not properly constructed or maintained, may create additional financial burdens on the County, especially if the County has to take over maintenance responsibilities. Private roads have typically been created by the subdivision of property through a Planned Development (PD) application.

In some instances, a private road may be permitted for a new subdivision, such as a restricted access gated development, provided adequate regional and emergency access gated development, provided adequate regional and emergency access is provided. Direct access to public roads is a typical standard for subdivisions in urban areas with the exception of those Planned Unit Developments which contain private streets. To ensure other nearby parcels will have adequate access in the future, road plans for a larger area are often required and evaluated as part of new subdivisions in urban areas. Subdivisions in rural areas may have direct or indirect access. In all cases, discretionary and non-discretionary applications are evaluated by the County to ensure that adequate access is available.

2. Alternative Transportation Modes

It is basically recognized that urban areas within Merced County will continue to grow and will become a larger percentage of the total County population. Commuting will become more extensive to reach large employment centers within and outside of Merced County. The movement of people, goods and services through non-automotive transportation modes is, and will continue to be, vitally important to Merced County. There are several alternative forms of transportation which serve County residents and businesses. Rail and air services transporting people and freight are vital components of the local economy, providing a link to the larger regional and statewide economies. Public transit systems help ease congestion and provide important transportation services to students, elderly and the disabled. Bicycle routes help encourage residents to use bicycles as an energy efficient form of transportation and they also serve recreational function. The Merced County Association of Governments (MCAG) will play an important role in the planning and developing of alternative modes of transportation in conjunction with the County of Merced and various local cities.

This section of the Circulation Chapter will focus on issues related to these alternative transportation modes.

a. Air and Rail

Merced County is served by four municipal airports and one regional airport for public use. These airports are operated by the Castle Joint Powers Authority, and the cities of Gustine, Los Banos, Merced and Turlock. Airport locations are shown in Map 4. There are also several private airstrips in Merced County. The municipal airports are primarily utilized for private aircraft. The Merced Airport provides commercial passenger and freight air services and is the only "regionally significant" airport in the County according to criteria used by the Civil Aeronautics Board. Castle Airport, which became a civilian facility upon closure of the Castle Air Force Base in September 1995, is also proposed as a regionally significant airport serving private and commercial aviation functions. The number of general aviation aircraft based at each airport and annual airport operations are expected to increase into the year 2000 due to general population increases and because of spillovers from airports in adjacent urban areas. Additional detail on the characteristics of each public use airport is presented in the Noise Chapter, starting on page IV-11. The private landing strips will not be focused on here as they do not provide a major transportation function in the County.

One issue regarding air transportation is maintaining compatible land uses in areas which are affected by airport operations. The County and each individual city, assisted by the Merced County Airport Land Use Commission's (ALUC) policies, is responsible to determine the compatibility of land uses and appropriate restrictions on activities to protect airport operations. This topic is also discussed in more detail in the Land Use Chapter.

Another issue is maintaining scheduled air carrier services at the Merced Municipal Airport. Regular scheduled commercial flights are an essential component to the economic growth of the County. Currently, United Express is the only commercial airline which serves Merced County. The airline is currently subsidized by the Essential Air Services (EAS) Program. The EAS Program provides Federal subsidies to airlines which bring their services to rural communities. This program is in danger of being eliminated from the Federal Department of Transportation budget.

Maintenance and improvements of the municipal airports is important for ensuring adequate safety and maintaining their transportation function. In the Regional Transportation Plan (RTP), MCAG estimates a funding shortfall of more than \$5,000,000 for needed projects in to 1993. Given current funding shortages, this deficiency could be expected to continue to the year 2000.

A final issue regarding air transportation is promoting those land uses around airports which can best benefit from air services, e.g., industries which utilize air carriers to distribute their products. It would be desirable to encourage industries which utilize air carrier services to locate as close as possible to the airport to

promote efficiency. The Merced Municipal Airport is currently the only airport in Merced County with scheduled cargo air services. However, most cities have established industrial zones adjacent to their airports (Los Banos and Merced), and the Castle Reuse Plan promotes major aviation-related commercial and industrial reuses.

Two companies currently provide rail service to Merced County; the Southern Pacific Transportation Company (SPTC) and the Atchison, Topeka and Santa Fe Railway (AT & SF) Company. The two companies operate a total of 110 miles of track on four main lines. All lines generally traverse the County in a northwest-southwest direction. These rail lines are primarily used for the movement of freight; although two Amtrack passenger trains currently run along the Santa Fe line with one passenger station in the City of Merced. The closest freight shipment harbor to the County is at the Port of Stockton. The rivers in Merced County, though the Merced and San Joaquin Rivers are navigable waterways, are not used for freight shipment. A recent issue which has developed involves the transfer of Amtrack services from the AT & SF to the S.P.T.C line. The major local impact of this possible switch would be the relocation of the rail station in the City of Merced to a proposed multi-modal station linked with commuter bus terminals. The relocation could benefit the County by providing daily rail service to the City of Modesto and possibly a third daily Amtrack train, which would be a transit option to automobile commuters on Highway 99.

Similar to airports, certain businesses and industries which transport large amounts of freight can greatly benefit from the efficiency of locating adjacent to existing rail lines. In Merced County, businesses and industries connect with the existing rail lines by the use of a spur line. However, spur lines can sometimes cross existing or planned roads and generally pose safety risks and inconveniences to automobile drivers and railroad operators. It must be noted that some land uses may also be incompatible with the noise emitted from use of the rail lines. (Noise incompatibility issues are discussed more thoroughly in the Noise Chapter of this Plan).

b. Public Transit

Public transit systems provide a valuable service to the County. Public transit benefits students, the disabled, the elderly, low income persons and many other residents of the County. It also assists in reducing traffic congestion, air pollution, energy consumption and the costs of personal transportation.

There are five public transportation providers in Merced County--the Merced Transit System (MTS), the Atwater Taxi Service (ATS), the City of Los Banos Van Service, the City of Dos Palos Van Service, and the Merced Area Regional Transit System (MARTS). Each of these services is explained in more detail below. The Merced County Association of Governments (MCAG) prepares an advisory Regional Transportation Plan (RTP) and improvement program in order to achieve a balance among these transportation systems.

The City of Merced operates the MTS which provides fixed routed and demand responsive services. The MTS fleet consists of ten passenger mini-buses which operate on three fixed routes and a dial-a-ride (DAR) service. The MTS provides services on weekdays from 7:00 a.m. to 5:00 p.m. with fares ranging from \$.50 to \$1.00 for the fixed route and the DAR services. The City of Merced is currently working with MCAG to determine the feasibility of establishing another fixed route system. The City of Atwater provides a demand responsive-system which operates 24-hours a day, seven days a week. The City of Atwater has made this possible by contracting with a local taxi cab company to provide this DAR service. The cities of Los Banos and Dos Palos each operate one van service within their respective boundaries as a public transit service. In the City of Los Banos, van service is available 9:00 a.m. to 3:30 p.m., Monday through Friday, and is available to senior citizens only. The City of Dos Palos operates its van service on the first and third Tuesdays of each month. It also is only available to senior citizens.

The County of Merced is responsible for operating MARTS, which has fixed route and DAR services throughout the County. Services for the MARTS is actually provided by the Merced Transportation Company, a private business, under contract with the County of Merced. The MARTS fleet consists of four, 12 passenger vans and six, 16 passenger minibuses (four are equipped with wheelchair lifts). Fixed route services connect 13 communities along three routes, the Red Route, the Green Route and the Winton-Atwater-Merced (WAM) Route (See Map 4). The Red Route operates Monday through Friday and makes two round trips daily through Merced, Beachwood, Castle Air Force Base, Atwater, Winton and Delhi. The Green Route operates Monday, Wednesday and Friday and makes one round trip through Merced, El Nido, Dos Palos, Los Banos, Santa Nella and Gustine. The WAM Route operates Monday through Friday and makes seven round trips daily through Merced, Beachwood, Atwater and Winton. MARTS also operates region specific DAR services. One shuttle operates between Merced, Le Grand and Planada; two between Winton, Atwater, Castle Air Force Base, Livingston, Delhi, Cressey, Hilmar and Ballico; one between Gustine, Santa Nella and Newman; and one between Dos Palos and Los Banos. All shuttle vehicles are equipped with wheelchair lifts. MCAG is currently working with the County of Merced to determine if another fixed route service should be added to the existing MARTS. Ridership is expected to increase steadily to the year 2000 with population growth.

Other private transportation companies also provide transit service in Merced County. Via Charter Lines offers bus transportation services through contract and charter agreements. Contract service is primarily Monday through Friday, 5:00 a.m. to 7:00 p.m., and usually operates on a fixed route service. Charter service is available year-round, 24 hours a day. Currently, the company provides contract services to the Merced County Schools System, the Merced County Regional Occupation Program and The New Hope Workshop. Via Charter Lines operates a total of 45 buses and is located in the City of Merced, near the Municipal Airport.

Greyhound-Trailways Bus Lines provides scheduled bus service through the San Joaquin Valley along Highway 99 and across the County along Highway 152. Bus terminals are located in the cities of Merced and Los Banos. Bus stops for these scheduled routes are located in the cities of Dos Palos, Atwater and Livingston and the unincorporated community of Delhi. Greyhound-Trailways also provides charter service in the County, most notably to Yosemite Valley.

The Merced Cab Company provides door-to-door service 24-hours a day to customers in the Merced urban area. About half of the company's business is senior citizens, who receive a discount. This company also provides emergency service to the ill and intoxicated after other transit operators close. The Atwater Taxi Company and City Taxi of Los Banos also provide taxi service.

c. Bicycle And Pedestrian Routes

Bicycle and pedestrian routes are recognized as important alternatives to motorized transportation. Pedestrian routes in Merced County primarily occur in the urban areas, while bike routes occur in both urban and rural area. However, both bicycle and pedestrian routes provide enjoyment, health benefits, and recreational opportunities while assisting to reduce air pollution, traffic congestion, energy consumption and personal transportation costs.

In Merced County, pedestrian routes are usually along sidewalks which parallel street patterns within urban areas to protect pedestrians from auto traffic. As the urban areas continue to grow, sidewalks will become increasingly available as they are a standard improvement requirement for new construction. Pedestrian routes in the form of hiking trails are also available to the public at local, state and federal parks and wildlife refuges.

In 1982, MCAG prepared the Merced County Regional Bikeway Plan. The Regional Plan provided background information relevant to establishing bikeways such as financial resources for funding bikeways, socio-economic factors regarding bicycle use, bicycle accident histories, and bikeway assumptions for the future. It also provided a bikeway plan which would connect the incorporated communities, unincorporated communities and recreational areas in the County together. Using this as a guide, Merced County adopted bicycle routes for individual unincorporated communities which are shown on the SUDP maps of each Community Specific Plan. This General Plan contains the Countywide Bicycle Route Plan, which is shown in Map 5. This Bicycle Route Plan takes into consideration the material provided earlier by MCAG and links together incorporated communities, unincorporated communities and recreational areas throughout the County. The Countywide Bicycle Plan also provides connections with the established bicycle routes of each city. It is important to remember that this is a plan to guide future road maintenance and improvements and may not reflect existing bikeway conditions. The future construction of bikeways will be administered by either the Merced County Department of Public Works or CALTRANS, depending upon which agency is responsible for the road.

Bike routes either have separated right-of-way travel lanes (Class I Bicycle Route) or shared rights-of-way along roads (Class II or III Bicycle Routes). Class I bikeways provide completely separated right-of-way designations for the exclusive use of bicycles and pedestrians, similar to the Lake Yosemite Bikeway. Class II bikeways provide a restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles along roads with through travel by vehicles and pedestrians prohibited, similar to "G" Street north of Yosemite Avenue. Class III bikeways provide only a shared right-of-way and is typically designated by signs. Generally, as vehicle traffic levels increase, a more exclusive right-of-way should be provided for bicyclists.

3. Other Infrastructure Issues

Local public facilities and utilities are essential to accommodate development. The variety of local service providers and agencies often create coordination problems. Anticipating the need for various public facilities and utilities and ensuring these services are available prior to development is one of the most important functions of Planning. The remaining portions of this section will cover electrical, natural gas, communications and crude oil transmission and distribution lines; canals, aqueducts and dams used for irrigation and water distribution; and urban infrastructure systems related to water, sewage and drainage facilities. The inventory and distribution of other public facilities is discussed further in the Land Use Chapter.

a. Transmission and Distribution Lines

Electricity, natural gas, crude oil and communications are all commodities distributed by either transmission lines, transmission towers, or pipelines. The larger transmission and pipelines situated in Merced County generally parallel the existing transportation corridors. (Map 6 identifies major electric transmission lines and Map 7 identifies major oil and gas pipelines.) Consequently, land use activities have been minimally affected. The major concerns that arise for the placement of future transmission and distribution lines are aesthetics, the possible removal of land from certain land use activities, and safety of surrounding residents. Probably the most noticeable impact of overhead transmission and distribution lines is their aesthetic or visual impact. Although it may be impractical to underground high power electrical transmission lines above 45 KV, other low power lines are often placed underground, particularly in urban areas, for aesthetic and safety reasons. It is generally recognized that the cost of undergrounding utilities is greater initially, but it eliminates future storm and tree damage maintenance costs. Pacific Gas and Electric Company (P.G. & E.) and the Turlock Irrigation District (T.I.D.) are responsible for the maintenance and operation of electrical and natural gas distribution lines in Merced County. P.G. & E. is currently seeking State approval for a new gas pipeline crossing western Merced County. Primarily the large petroleum corporations are responsible for the crude oil pipelines within the County.

The placement of these distribution and transmission lines, whether above or underground, affects the use of land by restricting the placement of most structures within the utility easements. Even residential subdivisions are often required to maintain a ten foot public utility easement on the front of all lots for the placement of gas, electric, telephone and cable television lines serving each dwelling. The use of large amounts of land for such public facilities or utilities may also remove the land from the tax roles. Ensuring safety from the improper placement of transmission and distribution lines is also important to the County; e.g., communications and electrical transmission structures can create safety problems and conflicts with cropdusting activities in rural areas and airport approach zones. Ruptured gas or oil lines may create hazards to populated areas affected by a leak or explosion and can close important roadways used for emergency evacuations. All of these concerns point to the need for inter-agency coordination, and a joint effort in creating multi-use transportation and distribution corridors. This coordination is important for the proposed P.G. & E. 84-mile long 500 KV transmission line in the western foothills of the San Joaquin Valley. Environmental review for the "California-Oregon Transmission Project" has been completed which outlines a preferred alternative and various measures to mitigate anticipated impacts.

b. Canals, Aqueducts and Dams for Irrigation Practices

Within Merced County is an extensive water delivery system for agricultural irrigation. The physical locations of the major irrigation facilities and natural water courses are shown in Map 34 presented in the Agricultural Chapter (VII). In addition, the State is exploring the development of a proposed "Los Banos Grandes Reservoir" on the Los Banos Creek, to store water for both urban and agricultural users.

Agricultural operations typically use surface water delivered by canals or laterals, underground water delivered by pumping facilities, or some combination thereof. In contrast, water delivery for urban areas is typically from underground water sources. Local service districts usually install deep-wells to obtain higher quality water. However, some communities may use surface water for its delivery system; e.g., the Santa Nella Community Services District obtains water for its urban delivery system from the California Aqueduct. In addition, the City of Dos Palos and neighboring special water districts are considering a joint water delivery system using the California Aqueduct Canal. Both locally, and on a statewide level, agricultural and urban water users tend to compete for water, whether from surface or underground supply sources.

As agricultural areas are slowly developed for urban activities, local irrigation districts typically require canals or laterals to be placed underground for reasons of safety and liability. Although this does increase levels of safety and efficiency of water delivery, it also represents an additional cost in the development process. Problems have surfaced when smaller parcels seem to be unfairly burdened with the entire cost of placing a canal underground, even though it is used by adjacent parcels. This typically occurs when one property owner is prepared to develop a

site before the adjacent property owners. This will likely continue to be an issue until an acceptable resolution is offered by individuals or local irrigation districts. An additional discussion of the water delivery systems and irrigation practices can be found in the Agricultural Chapter (VII) of this General Plan.

c. Urban Water, Sewer and Drainage Facilities

Adequate water supplies, sewage treatment systems and storm drainage facilities are basic requirements for serving urban areas planned for intensive development. Water supplies must be planned to provide potable water and adequate pressure for health and safety reasons. Sewage treatment systems must be planned to adequately treat effluent for health reasons. Storm drainage facilities must be planned for increased surface water runoff for health and safety reasons. The major parameters used in planning for these facilities include the extent of the service area, the projected service area population and the projected per capita use.

All cities and the larger unincorporated communities in Merced County have public water and sewage treatment facilities. The locations of the sewage treatment plants are identified in Map 3 in the Land Use Chapter, and capacities of the existing water and sewage treatment systems is presented in Table II-2. Other small unincorporated communities rely completely on the use of on-site water and sewer facilities. The community of Volta has, in fact, recently received approval from the Merced County Local Agency Formation Commission (LAFCO) to form a water district to correct individual well water quality problems. Also, the communities of Cressey and Stevinson are considering the formation of a water district.

A critical issue concerns the ability of individual water and sewer districts to provide adequate services for new development (this topic is discussed more thoroughly in the Land Use Chapter). The City of Dos Palos has exceeded its current sewage treatment capacity and is unable to provide additional connections at this time. This has impacted the communities of Midway and South Dos Palos which rely on the City of Dos Palos for providing sewage treatment services. The community of Winton is also near its capacity and is unable to provide additional sewage treatment services until the City of Atwater completes its proposed wastewater treatment plant expansion. It is clear that some communities do not have the water or sewage treatment capacity to accommodate anticipated growth. It is likely, therefore, that these communities will seek to expand their facilities in the future. The Merced County LAFCO will play an important role to ensure that adequate urban services continue to be available by evaluating the ability of local districts to expand services. LAFCO reviews requests to change municipal and district boundaries and is guided by the Cortese-Knox Local Government Reorganization Act of 1985.

Only the unincorporated communities of Hilmar and Franklin/Beachwood have some form of community drainage facilities which can be used by new development (although the County is pursuing a block grant for the installation of a community

TABLE II-2

SEWER AND WATER CAPACITIES

Incorporated Communities	SEWER			WATER		
	Total Capacity MGD	Average Daily Use	Remaining Capacity MGD	Total Pumping Capacity MGD	Average Daily Use MGD	Remaining Capacities MGD
Atwater ^{*1}	4.9	3.4	1.5	10.8	5.25	5.55
Dos Palos ^{**2}	.52	.65	.0	4.0	1.1	2.9
Gustine	1.0	.9	.1	3.5	1.0	2.5
Livingston	1.18	.85	.33	15.0	5.5	9.5
(Industrial)	5.0	4.5	.5			
Los Banos	2.5	2.0	.5	10.9	3.02	7.88
Merced	10.0	7.8	2.2	43.2	14.5	28.7
<hr/>						
Unincorporated Communities						
Delhi	.4	.32	.08	3.0	.54	2.46
Franklin/ Beachwood	.4	.25	.15	3.45	.86	2.59
Hilmar	.5	.25	.25	3.0	.4	2.6
Le Grand	.14	.04	.1	1.66	.96	.7
Midway ^{**}	.09	N/A	.0	N/A	N/A	N/A
Planada	.53	.34	.19	2.59	1.0	1.59
Santa Nella	.25	.1	.15	1.2	.4	.8
South Dos Palos ^{**}	.12	.035	.0	N/A	N/A	N/A
Winton [*]	.65	.56	.09	2.5	1.74	.76
Snelling	.06	.03	.03	Individual Wells		

MGD = Million Gallons per Day

N/A = Information Not Available

¹ Undergoing sewer expansion but no estimate on new capacity.

² New sewer pipeline expansion scheduled, completion date expected for late 1990.

* The Community of Winton shares sewage plant capacity with the City of Atwater.

** The Communities of Midway and South Dos Palos share sewage plant capacity with the City of Dos Palos.

drainage system in Planada). As the amount of impervious surface area increases, so will the amount of storm water runoff and the need to provide storm drainage facilities. If new development cannot connect to community drainage facilities, all storm water runoff must be accommodated on-site through percolation or detention basins. These individual basins are not as efficient as a community drainage system because they require more land area, they are an additional safety risk, and they are more expensive to maintain.

C. CIRCULATION GOALS, OBJECTIVES, POLICIES AND IMPLEMENTATION

GOAL 1:

A Road system which provides free movement of vehicles throughout the County.

Objective 1. A.:

All roads are appropriately classified by their existing and future use characteristics to effectively distribute vehicles.

Policies:

1. Establish a roadway system consisting of local roads, collector roads, arterial roads, and Freeways, adequate to serve existing and future land uses.

Implementation:

- 1) The County will continue to cooperate with incorporated cities within the County, [the University of California](#), adjacent counties, and State and Federal transportation agencies to ensure coordination of road systems.
- 2) The County will continue to consider road system improvements consistent with this Chapter as part of the annual Capital Improvement Program.
- 3) The County will review the Improvement Standards and Specifications Manual (Title 16 of County Code) to reflect the functional Classification System described in this Chapter.
- 4) The County will continue its involvement in the annual development of a Regional Transportation Plan by the Merced County Association of Governments.

Objective 1. B.:

Roadways are improved and maintained to provide an adequate peak period level of service (LOS) for existing and anticipated traffic volumes.

Policies:

2. The acceptable level-of-service for roadways located within rural areas of the County shall be LOS "C" or better.
3. The acceptable level-of-service for roadways located within urban growth areas such as HICs, SUDPs of unincorporated areas, or RRCs, shall be LOS "D" or better during peak traffic periods.
4. LOS "D" is acceptable for roadways located outside urban growth areas if the roadway services as a connector between urban growth areas.
5. LOS "E" and worse may be allowed on a minor component of the circulation system (such as a left turn movement from a local roadway) if a major component of the circulation system (such as a through movement on a collector or arterial roadway) would be significantly compromised in the process of improving the level-of-service of the minor component.
6. Within the SUDP of an incorporated city, the acceptable level-of-service shall be as stipulated in the adopted Circulation Element of the respective city, or where none is specified, as stipulated in Policies 3 and 5 of this Goal.
7. Right-of-Way dedication and roadway improvements shall be required with the approval of land use entitlements to offset circulation impacts resulting from the typical occupancy of such entitlement.

Implementation:

- 1) The County will continue to establish and collect Bridge and Major Thoroughfare Fees, and other fees adopted pursuant to law, to assist in financing improvements necessary to maintain an adequate level-of-service on roadways within the County.
- 2) The County will continue to limit the use of traffic control devices on arterial and Major Collector Roadways that will unjustifiably compromise the level-of-service on roadways within the County.

8. All methods to achieve cost effective design, construction and maintenance of existing and future roadways shall be pursued.
9. Require appropriate improvements to the structural section of County roadways for discretionary entitlements that will compromise the integrity of the existing road section as a direct result of the increase in commercial truck traffic.

Implementation:

- 1) The "Improvement Requirements" specified in Title 16 of the County Code will be used to determine appropriate right-of-way dedication and improvement requirements necessary for various entitlements consistent with this Chapter.
 - 2) The County will continue to apply the off-street parking provisions of the Zoning Code to reduce reliance on on-street parking.
 - 3) The County should continue to seek methods to fund needed roadway improvements and maintenance requirements which do not rely on traditional funding sources.
10. Existing and future rights-of-way shall be protected from encroachment of incompatible structures.

Implementation:

- 1) The existing roadway system and roadway standards will continue to be maintained by the County to ensure adequate rights-of-way are delineated.
 - 2) The County will continue to require encroachment permits for work within rights-of-way.
 - 3) In the review of development projects and discretionary permits, the County will not approve construction of structures within delineated rights-of-way unless it can be determined a structure will not interfere with function of the right-of-way.
11. Road rights-of-way and improvements shall be coordinated with incorporated cities and with adjacent counties to ensure compatibility.

12. Encourage use of Transportation Demand Management measures

in new residential and employment-generating development.

13. Where appropriate, encourage land use strategies that reduce reliance on single occupancy vehicles such as concentrated and integrated development.

Implementation:

- 1) The County will continue to maintain on file copies of Improvement Standards of incorporated cities, adjacent counties and local, State and Federal Transportation agencies.
- 2) The County will continue to request the Local Agency Formation Commission (LAFCO) to require entire rights-of-way to be included or excluded in proposed annexation boundaries.

Objective 1. C.:

Appropriate levels of roadway access are provided to all existing and future land uses.

Policies:

12. In urban areas newly created lots or parcels shall front upon an improved public road. Exceptions to this policy may be permitted for Planned Developments (PD), or lots fronting on privately maintained gated roads provided adequate regional circulation and emergency access is maintained, or for access to four or fewer parcels in a Rural Residential Center.
13. Appropriate means of access to a maintained public road shall be provided through the review of discretionary and non-discretionary entitlements.

Implementation:

- 1) The County Zoning and Subdivision Code provisions requiring road frontage for new lots in urban areas and legal access for tentative rural subdivisions will be implemented at the tentative subdivision review stage.
- 2) Require private roads and related improvements, to be designed and installed to County standards as contained in the Improvement Standards and Specifications Manual (Title 16 of County Code) and Subdivision Code (Title 17), unless

it can be demonstrated to the satisfaction of the approval authority that alternative improvements will be provided sufficient to fulfill the goals and objectives of this Chapter and the respective Codes.

- 3) Continue to require encroachment permits to control access points on public roads.
14. Consideration of subdivision and parcel map applications in Rural Residential Centers shall require preparation by the applicant of a local street pattern for the 1/4 section within which the proposed division is located.

Implementation:

Local 1/4 section road plans will be required as part of a complete tentative subdivision application within Rural Residential Centers. Where a previously accepted road pattern exists for the surrounding area, new subdivisions may conform to this pattern.

GOAL 2:

A circulation system which provides for a variety of transportation modes for the safe and efficient movement of people and goods throughout the County.

Objective 2. A.:

Rail and air transportation systems which provide safe, efficient and reliable movement of passengers and freight.

Policies:

1. Support and protect the operation of public use airports.

Implementation:

Implementation of Policies 9-12 contained under Objective 9. A. of Goal 9 in the Land Use Chapter shall be followed.

2. Support the continued operation of existing rail lines and terminals.
3. Encourage coordination of air and rail passenger services with other public transportation.
4. Encourage land uses which transport large quantities of goods or materials to locate in areas served by rail or air transportation facilities.

5. Encourage alternatives to at-grade rail crossings at existing and future roads.

Implementation:

- 1) Industrial and commercial activities which involve freight movement will be encouraged to locate near airports which have air freight service and near rail lines in urban areas.
- 2) Where possible, reduce railroad spur line conflicts with existing and proposed roads.
- 3) In the design of new roads, seek alternatives to at-grade rail crossings such as bridges or tunnels.

Objective 2. B.:

An established bikeway system meeting the existing and future needs.

Policies:

6. Encourage the construction of Class I, II or III bike routes as designated in the overall Merced County Bikeway Plan and in Community Specific Plans.
7. The location and construction of bikeways shall be coordinated with incorporated cities, [the University of California](#), ~~and~~ adjacent counties, [and other agencies](#).

Implementation:

- 1) The design and construction of bicycle lanes should follow the [Planning and Design Criteria for Bikeways in California](#), published by CALTRANS pursuant to Sections 2373-2376 of the Streets and Highways Code.
- 2) Pursue all available funding sources for the construction and maintenance of bicycle facilities from local, State and Federal funds.
- 3) Consideration should be given to installing bike storage facilities at major transportation terminals and commercial and employment centers.

Objective 2. C.:

A public transit system adequate to meet existing and future population needs through the year 2000.

Policies:

8. Support efforts by the Merced County Association of Governments (MCAG) and other public entities to improve public transportation.

Implementation:

- 1) Continue to design and expand the MARTS line to be responsive to low mobility groups.
 - 2) Pursue efforts to obtain grants and other funding to offset costs of maintaining and expanding public transportation systems.
 - 3) Cooperate in efforts to improve public awareness of, and access to, public transportation systems.
9. Encourage and develop programs which promote the use of ridesharing, car-pooling and van-pooling.

Implementation:

- 1) Pursue techniques to reduce single-driver commute trips such as mixed-use developments or private shuttle vans at large employment centers.
- 2) Consider establishing "park and ride" facilities in urban communities with a high commuter population.

GOAL 3:

An adequate system for the transmission and distribution of energy, water and information.

Objective 3. A.:

Energy and communication transmission and distribution lines are adequately provided for within existing and future right-of-ways and easements.

Policies:

1. Electrical, gas, crude oil and communication transmission and distribution lines should parallel major roads or rail systems.
2. New transmission and distribution lines shall be encouraged within existing utility easements and rights-of-way.
3. Electrical interference to adjacent land uses shall be considered in the placement of electrical and other transmission facilities.

Implementation:

- 1) Encourage joint use utility easements throughout the County.
- 2) Ensure utility and pipeline companies and districts maintain contingency plans for potentially hazardous situations such as pipeline breaks and fallen power lines.
- 3) Coordinate with the Federal Communications Commission to ensure the proper placement of communication lines and towers.
- 4) Obtain utility easements on individual parcels at the subdivision map approval stage to provide adequate area for installation of improvements, including sewer, water, cable-television and telephone lines.

GOAL 4:

Adequate water, sewer and drainage facilities are provided to meet urban needs of the County.

Objective 4. A.:

Within designated urban areas, there exists systems for sewer collection and treatment, water distribution and storm water collection.

Policies:

1. Encourage providers of public water, sewer and storm drainage systems to maintain and expand their systems to meet the development needs of the County.
2. Effects on the capacity and distribution systems of water, sewer and storm drainage facilities shall be considered in reviews of discretionary and non-discretionary permits.

Implementation:

- 1) Assist communities and special districts in applying for grants to obtain adequate water, sewage and drainage facilities.
- 2) Utilize implementation under Policy 3 of Objective 1. B. under Goal 1 in the Land Use Chapter.

D. CIRCULATION CHAPTER APPENDIX

1. Bibliography
2. Traffic Service Characteristics By Highway Type
3. Intersection Level of Service Concept
4. Proposed Major Road Classifications

Unincorporated Communities:

Delhi SUDP

Franklin/Beachwood SUDP

Hilmar SUDP

Le Grand SUDP

Planada SUDP

Santa Nella SUDP

[University Community SUDP](#)

Volta SUDP

Winton SUDP

Atwater RRC #1

Merced RRC #1

City Circulation Plans:

Atwater

Dos Palos

Gustine

Livingston

Los Banos

Merced

CIRCULATION CHAPTER APPENDIX - PART 1

BIBLIOGRAPHY:

- a. Technology Sharing Report 80-204, Design of Urban Streets, January 1980, U.S. D.O.T. Federal Highway Administration, Washington, D.C.
- b. 1982 California State Rail Plan, State of California Business, Transportation and Housing Agency Department of Transportation, Division of Mass Transit.
- c. Planning and Design Criteria for Bikeways in California, June 1978, State of California Business and Transportation Agency, Department of Transportation.
- d. Merced County Regional Transportation Plan Update, 1988, Merced County Association of Governments (MCAG).
- e. Merced County Regional Transportation Improvement Program, 1988, MCAG.
- f. Comprehensive Transit Survey for Merced County, 1988, MCAG.
- g. Regional Transit Development Plan, 1986, MCAG.
- h. Merced County Regional Bikeway Plan, 1982, MCAG.
- I. 1985 Draft Merced County Airport Land Use Commission Policy Plan, MCAG.

CIRCULATION CHAPTER APPENDIX - PART 2

TRAFFIC SERVICE CHARACTERISTICS BY HIGHWAY TYPE

Level of Service

A Two-Lane

Operating speeds of 60 mph or higher. 75% of passing maneuvers can be made with little or no delay. Under ideal conditions, a service volume of 400 passenger vehicles/hour, two-way, can be achieved.

A Multi-Lane Rural w/o Access Control

Operating speed 60 mph or greater. Under ideal conditions, volume is limited to 600 passenger cars per lane per hour or 30 percent of capacity. Average speeds are likely to be influenced by speed limits.

A Urban and Sub-Urban Arterials

Average over-all travel speed of 30 mph or more. Free flowing with volume/capacity ratio of 0.60. Load factor at intersections near the limit of the 0.0 range. Peak-hour factor at about 0.70

A Controlled Access Highways

Free flow. Operating speeds at or greater than 60 mph. Service volume of 1400 passenger cars per hour on 2-lanes, on direction. Each additional lane serves volume of 1000 vph lane.

Level of Service

B Two-Lane

Operating speeds of 50 mph or higher. Volumes may reach 45% of capacity with continuous passing sight distance. Volumes of 900 passenger cars per hour, two-way, can be carried under ideal conditions.

B Multi-Lane Rural w/o Access Control

Beginning of stable flow area. Volume at which actions of preceding vehicle will have some influence on following vehicles. Volume will not exceed 50% of capacity or 1000 passenger vehicles per lane per hour at a 55 mph operating speed under ideal conditions.

B Urban and Sub-Urban Arterials

Average over-all speeds drop due to intersection delay and inter-vehicular conflicts, but remain at 25 mph or above. Delay is not unreasonable. Volumes at 0.70 of capacity and peak-hour factor approximately 0.80. Load factor at intersections approximately 0.1.

B Controlled Access Highways

Higher speed range of stable flow. Operating speed at or greater than 55 mph. Service volume on 2-lanes in one direction not greater than 2000 passenger vehicles per hour. Each additional lane above two in one direction can serve 1500 vph.

Level of Service

C Two-Lane

Flow still stable. Operating speeds of 40 mph or above with total volume under ideal conditions equal to 70% of capacity with continuous passing sight distance, or 1800 passenger vehicles per hour, two-way.

C Multi-Lane Rural w/o Access Control

Stable flow to a volume not exceeding 75% of capacity or 1500 passenger cars per lane per hour, under ideal conditions, maintaining at least a 45 mph operating speed.

C Urban and Sub-Urban Arterials

Service volumes about 0.80 of capacity. Average over-all travel speeds of 20 mph. Operating conditions at most intersections approximate load factor of 0.3. Peak hour factor approximately 0.85. Traffic flow still stable with acceptable delays.

C Controlled Access Highways

Operation still stable, but becoming more critical. Operating speed of 50 mph and service flow on two-lanes in one direction at 75% of capacity or not more than 5 minutes flow rate of 3000 passenger cars per hour. Under ideal conditions each additional lane above two in one direction would serve 1800 vph.

Level of Service

D Two-Lane

Approaching unstable flow. Operating speeds approximately 35 mph. Volumes, two-direction, at 85% of capacity with continuous passing opportunity, or 1700 passenger cars per hour under ideal conditions.

D Multi-Lane Rural w/o Access Control

Approaching unstable flow at volumes up to 90% of capacity or 1800 passenger cars per lane per hour at an operating speed of about 35 mph under ideal conditions.

D Urban and Sub-Urban Arterials

Beginning to tax capabilities of street section. Approaching unstable flow. Service volumes approach 0.90 of capacity. Average over-all speeds down to 15 mph. Delays at intersections may become extensive with some cars waiting two or more cycles. Peak hour factor approximately 0.90; load factor of 0.7.

D Controlled Access Highways

Lower speed range of stable flow. Operation approaches instability and is susceptible to changing conditions. Operating speeds approximately 40 mph & service flow rates at 90% of capacity. Peak 5 minutes flow under ideal conditions cannot exceed 3600 vph for 2-lanes, 1 direction; 1800 vph each added lane.

Level of Service

E Two-Lane

Operating speeds in neighborhood of 30 mph but may vary considerably. Volumes under ideal conditions, two-way, equal to 2000 passenger vehicles per hour. Level E may never be attained. Operation may go directly from Level D to Level F.

E Multi-Lane Rural w/o Access Control

Flow at 100% of capacity or 2000 passenger cars per lane per hour under ideal conditions. Operating speeds of about 30 mph or less.

E Urban and Sub-Urban Arterials

Service volumes at capacity. Average over-all traffic variable, but in areas of 15 mph unstable flow. Continuous back-up on approaches to intersections. Load factor at intersections in range between 0.7 and 1.0. Peak hour factor likely to be 0.95.

E Controlled Access Highways

Unstable flow. Over-all operating speeds of 30-35 mph. Volumes at capacity or about 2000 vph lane under ideal conditions. Traffic flow metered by design constrictions and bottlenecks, but long back-ups do not normally develop upstream.

Level of Service

F Two-Lane

Forced, congested flow with unpredictable characteristics. Operating speeds less than 30 mph. Volumes under 2000 passenger cars per hour, two-way.

F Multi-Lane Rural w/o Access Control

Forced flow, congested condition with widely varying volume characteristics. Operating speeds of less than 30 mph.

F Urban and Sub-Urban Arterials

Forced flow. Average over-all traffic speed below 15 mph. All intersections handling traffic in excess of capacity with storage distributed throughout the section. Vehicular back-ups extend back from signalized intersections, through unsignalized intersections.

F Controlled Access Highways

Forced flow. Freeway acts as a storage for vehicles backed-up from downstream bottleneck. Operating speeds range from near 30 mph to stop-and-go operation.

Source: AASHO Urban Manual, p.320

APPENDIX PART-3

INTERSECTION LEVEL OF SERVICE CONCEPT

Level of Service A Volume/Capacity Ratio = 0 - 0.60

- * Free flow conditions
- * No vehicle waits longer than one signal indication

Level of Service B Volume/Capacity Ratio = 0.61 - 0.70

- * Stable traffic flow
- * Motorists rarely wait through more than one signal indication

Level of Service C Volume/Capacity Ratio = 0.71 - 0.80

- * Stable and acceptable flow but speed and maneuverability somewhat restricted due to higher volumes
- * Motorists intermittently wait through more than one signal indication
- * Occasional backups behind left turning vehicles

Level of Service D Volume/Capacity Ratio = 0.81 - 0.90

- * Extensive delays at times
- * Some motorists, especially left turners, may wait through one or more signal indications, but enough cycles with lower demand occur to prevent excessive backups
- * Maneuverability restricted

Level of Service E Volume/Capacity Ratio = 0.91 - 1.00

- * Very long queues may create lengthy delays, especially for left turning vehicles
- * Volume at or near capacity

- * Unstable flow

Level of Service F Volume/Capacity Ratio = 1.01 or greater

- * Backups from locations downstream restrict movement at intersection approaches
- * Forced flow conditions
- * Stoppage for long periods due to congestion
- * Volumes drop to zero in extreme cases

CIRCULATION CHAPTER APPENDIX PART 4

PROPOSED MAJOR ROAD CLASSIFICATIONS

OPEN SPACE/ CONSERVATION

VI – OPEN SPACE/CONSERVATION

C. OPEN SPACE/CONSERVATION CHAPTER GOALS, OBJECTIVES AND POLICIES

GOAL 1:

Habitats which support rare, endangered or threatened species are not substantially degraded.

Objective 1. A.:

Rare and endangered species are protected from urban development and are recognized in rural areas.

Policies:

1. Recognize as significant wetland habitats those areas which meet the definition of having a high wetland habitat value based on the Adamus methodology and based on the Army Corps of Engineers delineation method.
2. Continue to regulate the location, density and design of development to minimize adverse impacts and encourage enhancement of rare and endangered species habitats.
3. The redesignation of land from a rural to an urban designation should occur in careful consideration of the potential impact on significant habitats and conformance with the Open Space Action Plan.
4. Urban designated areas should not include identified threatened species habitat areas unless specific provisions are made for their protection.
5. Urban uses which could result in significant loss of sensitive habitat should be directed to less sensitive wetland, wildlife and vegetation habitat areas if possible.
6. Buildings and structures approved for temporary residential use, such as duck club cabins, in significant wetland, non urban designated areas should not be converted to permanent residential use.
7. In wetland areas, all public utilities and facilities, such as roads, sewage disposal ponds and gas, electrical and water systems, should be located and constructed to minimize or avoid significant loss of wetland resources.
8. Development approval adjacent to rare and endangered species habitats or within identified significant wetland should include mechanisms to ensure adequate on going protection and monitoring occurs.
9. Significant aquatic and waterfowl habitats should be protected against excessive water withdrawals which would endanger or interrupt normal migratory patterns.

Implementation:

Where sensitive habitat areas are threatened by urban development or other activities, the County may use Area Plans in order to address resources, open space, land use, circulation, infrastructure, or conservation issues.

Objective 1. B.:

Local, State and Federally managed lands are recognized.

Policies:

10. Special agricultural commercial uses that are directly related to and a part of an agricultural enterprise or operation, and characteristically specific commercial or industrial uses in rural areas should not be located adjacent to Federal or State wildlife refuges.
11. The division of parcels which is determined to result in nonagricultural uses should be avoided, adjacent to Federal and State designated wildlife refuge areas.
12. Hazardous Waste Residual repositories (as defined by the Merced County Hazardous Waste Management Plan) shall not be located in significant wetland and threatened species habitats or adjacent to State and Federal wildlife refuges or management areas.

Objective 2. F.:

Air quality which meets or exceeds local and regional air quality management goals.

Policies:

24. Evaluate potential air quality impacts through the environmental review of all development projects which may significantly increase air emissions.
25. The County will assist in voluntary efforts to improve air quality through regional cooperation and will resist efforts to create additional State air pollution mandates which are contrary to the overall goals of the General Plan.
26. All development projects will be reviewed for compliance with applicable regional air quality plans.
27. In planning of new SUDPs, the County should encourage the use of innovative technologies to improve air quality, such as incorporation of facilities for zero emission vehicles into project design.

Objective 3. C.:

Open space lands are used for public protection purpose.

Policies:

12. Open space recreational uses should be considered appropriate for areas identified as noise impacted.
13. Agriculture shall be considered a compatible land use in public and private recreation areas which must be protected and buffered.
14. Open space buffers and larger minimum parcel sizes should be required around existing and abandoned (un-reclaimed) solid waste dump sites.
15. Landfills should be located to avoid health and safety risks and to ensure that future adjacent land uses do not restrict landfill operations.
16. Sites identified by the State Department of Health Services and the local Health Department as spill sites or hazardous waste sites shall not be considered for development approvals, unless clean-up occurs prior to or is part of said development.

Implementation:

The County may use Area Plans in order to ensure coordinated planning of open space and recreational uses, and to address resource, open space, land use, circulation, infrastructure or conservation issues.