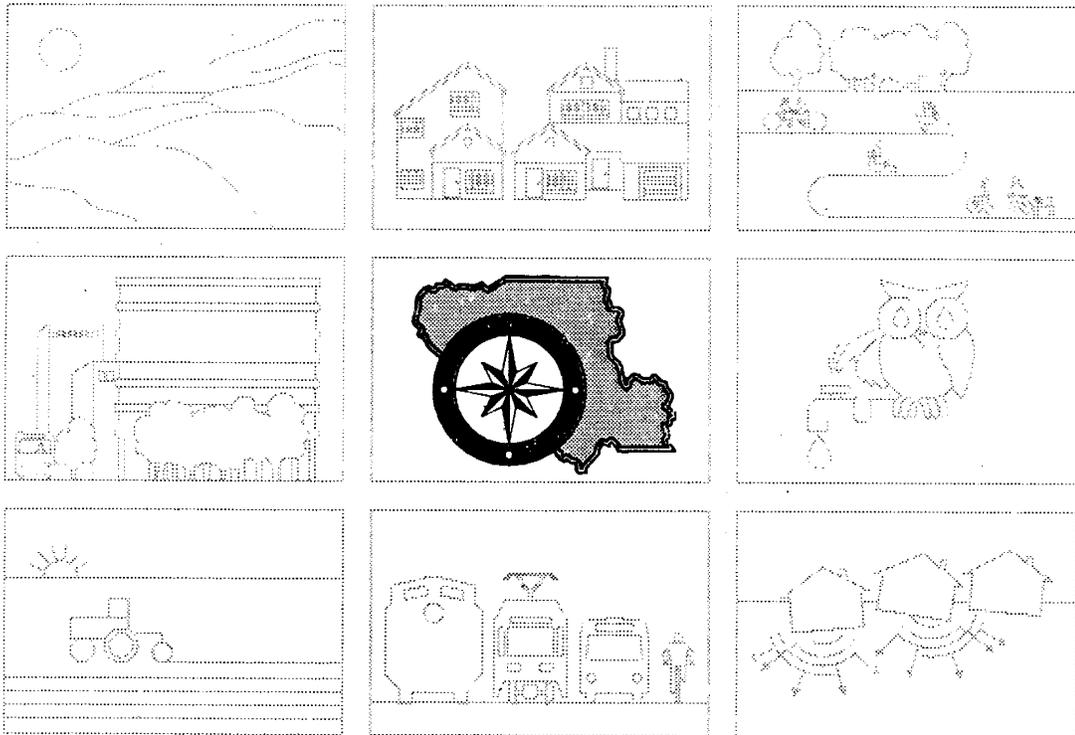


Santa Clara County General Plan Draft Environmental Impact Report



File # 5722-00-00-94EIR
SCH # 94023004

Lead Agency: Santa Clara County

September 1994

**SANTA CLARA COUNTY
GENERAL PLAN
DRAFT ENVIRONMENTAL IMPACT REPORT
SEPTEMBER, 1994**

PREPARED FOR

SANTA CLARA COUNTY PLANNING DEPARTMENT

BY

PLANNING ANALYSIS & DEVELOPMENT

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CHAPTER 1

INTRODUCTION

A. CEQA Process

1. Requirement for Environmental Impact Report (EIR)

This document is an EIR on Santa Clara County's Draft 1994 General Plan. The Santa Clara County Draft 1994 General Plan is a "project" as defined by the California Environmental Quality Act (CEQA). All projects are required by state law to undergo environmental review. The land uses and physical development which would be permitted by the County's General Plan have the potential to cause significant environmental impacts. Therefore, it is appropriate that an Environmental Impact Report (EIR) be prepared. In authorizing this EIR, the County is meeting its responsibilities under CEQA.

This EIR has been prepared in accordance with the California Environmental Quality Act of 1970 (CEQA), as amended (Public Resources Code, Section 21000, et seq.) and the State Guidelines for Implementation of the California Environmental Quality Act of 1970, as amended (California Administrative Code Section 150000, et seq.).

Once adopted, the Draft 1994 General Plan will, from a legal standpoint, guide the exercise of the County's "police power" by way of its zoning and subdivision regulations, and the exercise of corporate power through the provision of capital facilities and improvements. Its adoption is regarded as a legislative act, and as such, its provisions are subject to the initiative and referendum processes.

The aspects of the General Plan that are analyzed in this EIR are those that can cause environmental impacts. Although the EIR discusses countywide issues, the impact analysis emphasizes lands over which the County has independent land use authority, i.e., lands outside the cities' and their Urban Service Areas. Development on unincorporated land within the Urban Service Areas must conform with the applicable city's General Plan. The impacts of policies of the proposed General Plan are assessed with respect to the rural unincorporated areas. These policies govern (a) the range of allowable uses, (b) densities and (c) minimum parcel size. Chapter 3, Project Description, includes projections of expected growth over the 15 year planning horizon of the Draft 1994 General Plan.

2. Program EIR

A general plan may be regarded as a planning program. It will be used to guide future development in the planning area. This EIR on the Draft 1994 General Plan examines the impacts of future development under the plan, and thus can be used to define the scope of environmental analysis needed by future projects. Under the definition of CEQA Section 15168 cited below, this EIR is a program EIR.

A program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either:

- (1) Geographically,*
- (2) As logical parts in the chain of contemplated actions*
- (3) In connection with issuance of ... plans, or other general criteria to govern the conduct of a continuing program.*

CEQA encourages the preparation of program EIRs in order to:

- *Provide an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action;*
- *Ensure consideration of cumulative impacts that might be slighted in a case-by-case analysis;*
- *Avoid duplicate evaluation of basic policy considerations;*
- *Allow the Lead Agency, the Santa Clara County Department of Planning and Development, to consider broad policy alternatives and program-wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts; and,*
- *Permit a reduction in paperwork.*
(CEQA Guidelines 15168(b)).

3. Intended Use

State CEQA Guidelines (Sections 15089 and 15132) require a brief statement describing the intended use of an EIR. This EIR provides information to the public and decision-makers regarding the impacts of the project on the physical environment. It recommends measures to mitigate these impacts, and it analyzes alternatives that would reduce or eliminate the significant

impacts identified in this report. In accomplishing this, the EIR is a public disclosure document that guides decisions about the nature of the plan, and implementation of other projects that will be proposed, approved or denied under the plan. The Santa Clara County Planning Commission, as advisory body, and County Board of Supervisors, as decision-making body, will consider the information in this document in the course of their deliberations about the Draft 1994 General Plan.

Future proposals for development may use this EIR as a source of baseline information regarding environmental conditions and potential impacts. As envisioned by CEQA (Section 15168(d)), future project EIRs or Initial Studies would be able to incorporate by reference various portions of this EIR, including environmental setting information, impact analyses, and mitigation measures, as appropriate to each project, a concept known as "tiered" environmental analysis (*CEQA Guidelines*, Section 15152).

For future projects, new research and reporting can focus on site-specific characteristics and potential impacts not covered in this document. In this EIR, environmental impacts from the land uses and development projected to occur over the time horizon of this General Plan are assessed in as much detail as is possible and appropriate for a "program-level" document. The EIR proposes policy-based mitigation measures. Some mitigations supplement policies to the Draft 1994 General Plan, in order to enhance environmental protection. These mitigations could be adopted as policies now or in the future as a general plan amendment. Mitigations accepted by the Board of Supervisors become binding in the County, through a mitigation monitoring program, regardless of whether they are formally made part of the Draft 1994 General Plan. This EIR should be regarded as an integral component of the ongoing land use planning and implementation process for the County of Santa Clara.

B. Need for the Draft 1994 General Plan

The current General Plan of Santa Clara County was adopted by the Board of Supervisors in 1980. The purpose of the County's General Plan Review Program, formally begun in 1990, was essentially to update the Plan in order to maintain its relevancy and validity as a decision-making guide for land use and development. Additional rationale for the review program included the need to evaluate the status of General Plan implementation.

Those general purposes are reflected in four goals that were formally adopted by the Phase 2 Advisory Committee for their work in the General Plan Review Program, refining somewhat the purposes of the program. The goal statement is as follows:

To produce a General Plan which is:

- a. *based upon an articulated vision of a desired future for Santa Clara County;*
- b. *up-to-date;*

- c. *easier to use and understand;*
- d. *more implementable.*

The Draft 1994 General Plan builds upon the foundation of basic policies contained in the 1980 General Plan, which themselves originated from the 1973 Urban Development/Open Space Plan (UD/OS). Those fundamental policies remain the cornerstone of countywide urban growth management strategies, as reflected in the policies of the cities, the County and the Santa Clara County Local Agency Formation Commission (LAFCO). These jointly-adopted policies affirm that urban development may only occur on lands within defined city Urban Service Areas (USAs), and that conversely, only rural land uses and densities will be permitted on lands outside USAs under the planning and regulatory authority of the County.

The principal differences between the 1980 General Plan and the Draft 1994 General Plan are summarized below:

- reorganize the plan into three main sections addressing "Countywide", "Rural Unincorporated", and "Urban Unincorporated" areas;
- update the policies and supporting rationale to reflect studies, plans, and changes in state and federal laws affecting land use;
- update the Implementation Recommendations to more effectively carry out the Plan's policies;
- incorporate a Vision Statement; and
- achieve better consensus for countywide planning and coordination.

C. Areas of Concern

The following areas of concern have been identified in association with the Draft 1994 General Plan:

- **Long Term Growth Boundaries**
Limits on future urban expansion were not part of the 1980 General Plan. The Draft 1994 General Plan recommends that cities delineate "long term urban growth boundaries" that would indicate the lands they anticipate will be needed and appropriate for urban development within the next 15 years.

- **Countywide Planning**
The Draft 1994 General Plan retains the policies intended to encourage the preparation and adoption of a countywide plan that would govern both incorporated and unincorporated lands in the County for land use, growth management, and resource protection/open space planning. The Draft 1994 General Plan will retain these policies, but they will not receive highest priority since some issues are being handled by other levels of government and the County does not have the monetary resources to implement them.
- **Golf Courses/Country Clubs**
With the increasing number of proposals for golf courses in rural areas of the County, concerns have been expressed regarding potential impacts of golf courses on areas designated for agricultural uses. Policies have been added to the Draft 1994 General Plan that would prohibit golf courses in the area designated "Agriculture" east of Gilroy. The Plan requires that the County, prior to approving golf courses in other areas designated as "Agriculture", conduct a study to establish specific policies and criteria for the development of golf courses within agricultural areas.

D. Contents of this EIR

This EIR consists of eight chapters and appendices, which are described below.

- Chapter 1 is the introduction to the EIR. It discusses the CEQA process, need for the project, areas of controversy, chapter by chapter contents and public review process.
- Chapter 2 is the summary of significant impacts and mitigation measures.
- Chapter 3 is the project description, which presents an overview of the project location, characteristics of the Plan and its organization, focus of the EIR including the Land Use Map and designations, the planning process, and alternatives to the project.
- Chapter 4 is a summary of Countywide issues and policies, and explains the relationship to the rural and urban unincorporated areas.
- Chapter 5 presents the environmental setting, impacts, and mitigation measures for the proposed plan. Areas of analysis include land use, agricultural resources and mineral extraction, housing, transportation, hazardous substances, aviation hazards, geology, flood hazards, water supply and wastewater, biological resources, visual/aesthetics, noise, climate and air quality, public services,

Chapter 1: Introduction

cultural resources, and energy conservation. It describes policies carried forward from the 1980 General Plan, environmental protection policies of the 1994 Draft General Plan and other ordinances and regulations in the County that protect these resources as well.

- Chapter 6 discusses required CEQA considerations including growth-inducing and unavoidable adverse impacts.
- Chapter 7 examines project alternatives that may reduce the project's environmental impacts.
- Chapter 8 identifies the EIR authors, organizations and persons consulted in the preparation of the report.
- The Appendices include the technical documents that support the EIR analysis.

E. EIR Public Review Process

This is subject to a 45-day public review period, during which federal, state, and local agencies and the concerned public may comment on the EIR's analysis of the environmental impacts of the Draft 1994 General Plan. Comments on the EIR may be sent to:

Hugh Graham, Senior Planner
Planning Office
Department of Planning and Development
County Government Center, East Wing
70 West Hedding Street
San Jose, CA 95110

After the conclusion of the 45-day review period, a Final EIR will be prepared, containing responses to public comments received during the review period and any necessary changes to the EIR. The County Board of Supervisors will then take action to certify the EIR and adopt the Draft 1994 General Plan.

CHAPTER 2 SUMMARY

This chapter presents summaries of impacts and mitigation measures in two tables. Table 2-1 is a table of all impacts identified in the EIR, including those that were found to be significant or insignificant. The table indicates whether impacts are significant and cannot be mitigated to a level of insignificance (S), significant and can be mitigated to a level of insignificance (M) or are insignificant and have no need for mitigation (I). Two other categories are indicated as well: "U" and "R". "U" indicates that the extent of an impact and/or the effectiveness of mitigation cannot be determined at this time. This category applies to impacts that would result from specific projects which are not part of the Draft 1994 General Plan per se, but might be developed consistent with plan policies in the future. "R" means that the topic is more fully addressed under another topic in the EIR.

Table 2-2 is a summary of significant impacts only. It begins with the significant impacts that cannot be fully mitigated. There are four of these related to; transportation, geology, public services, and cultural resources. The rest of the impacts are mitigatable. The table indicates the significance of the impact after mitigation by placing a "YES" or "NO" in the last column. The notation "Unknown" has the same meaning as in Table 2-1. All of the mitigatable impacts would be insignificant after mitigation.

**TABLE 2-1
All Environmental Impacts**

Impact		Land Use	Impact	Biotic Resources	
1.	Growth under the Plan	I	1.	Critical habitat areas	M
2.	Change in Land Use Patterns		2.	Incorporation of rural lands	M
A.	USA Expansions	M	3.	Resource management on public lands	M
B.	East Foothills Area	I	4.	Riparian resources	M
C.	Rural Residential Areas	I	5.	Screening	M
D.	Clustering Policies	I	6.	Freshwater habitats	M
E.	RV Parks in Hillside Areas	M	7.	Degradation of riparian areas	M
3.	Land use compatibility	M	8.	Grasslands	M
4.	Inefficient land use patterns	M	9.	Firewood collection	I
5.	Land use conflicts	M	10.	Fire Suppression	I
6.	Conformity with other plans & policies	I	Transportation		
7.	Cumulative impacts	R	1.	Non-motorized circulation	I
			2.	Traffic volumes	I
			3.	Large vehicles	M
Agricultural/Mineral			4.	Substandard roads	M
1.	Growth Under the Plan		5.	Environmental consequences of rural road improvements	U
A.	Subdivision of parcels in agriculture area	I	6.	Agriculture and Urban traffic conflicts	M
B.	Non-residential projects	I	7.	Incompatible circulation patterns	I
2.	Subdivision of prime agricultural land	M	8.	Commute Traffic	I
3.	Loss of crop production & variety	I	9.	Scenic corridors	I
4.	Golf courses	M	10.	Inadequate general aviation capacity	U
5.	Subdivision of ranchlands	I	11.	Cumulative traffic volumes	U
6.	Grazing	M	12.	Countywide cumulative traffic	S

Impact Agricultural/Mineral (cont.)			
7.	Incompatibilities between urban and agriculture	M	Impact Noise
8.	Impacts due to agriculture	R	1. Construction related noise I
9.	Development on legal lots of record	M	2. Noise of future traffic on existing land uses I
10.	Reduction of Williamson Act contributed land	M	3. Exposure of future land to traffic noise I
11.	Uses permitted on Williamson Act land	M	4. Train related noise I
12.	Cumulative impacts of urbanization on agriculture	M	5. Airport related noise I
1.	Potential loss of mineral resources	I	6. Cumulative noise impacts I
2.	Quarry/residential use incompatibilities	I	
Housing		Climate and Air Quality	
1.	Jobs/Housing imbalance	I	1. Constructed impacts on air quality I
2.	Housing density	I	2. Long-term emissions from motor vehicles I
3.	Housing affordability	I	3. Consistency with clean air plan I
4.	Special needs housing	I	4. Odors I
5.	Countywide housing impacts	I	5. Cumulative regional emissions from motor vehicles I
		Visual/Aesthetic	
Geology		1.	Visual effects of growth on open space
1.	Landslides	I	A. Rural residential I
2.	Soil Creep	I	B. Agriculture M
3.	Seismic hazards	S	C. Hillsides

Impact		Geology (cont.)		Impact Visual/Aesthetic (cont.)		
4.	Soil Corrosion		I	D.	Ranchlands	I
Flood Hazards				2.	Development of ridgelines	I
1.	Stormwater flooding		M	3.	Gateways & scenic transportation corridors	I
2.	Tidal flooding		I	Water Supply and Wastewater		
3.	Dam failure		I	1.	Water supply	I
4.	Drainage		M	2.	Ground water quality	M
Public Services				3.	Reservoir water quality	I
Fire				4.	Nonpoint source pollution	I
1.	Fire Services		I	5.	Well contamination	I
2.	Cumulative fire services impact		I	6.	Inadequate wastewater treatment capacity	I
Police				Public Services (cont.)		
1.	Police services		I	Parks and Recreation		
2.	Cumulative police protection impact		I	1.	Parks and Recreation	I
Schools				2.	Cumulative impacts	M
1.	School enrollment		M	Health & Emergency Services		
2.	RV parks		I	1.	Medical & hospital services	I
3.	Cumulative Impacts		S	2.	Emergency services	I
Solid waste collection				3.	Cumulative energy demands	I
1.	Solid waste collection & disposal		I			
2.	Cumulative solid waste impacts		I			
Hazardous Substances				Aviation Hazards		
1a.	Household hazardous waste		I	1.	New or expanded airport facilities	U
1b.	Agricultural related hazardous waste		I	2.	Airport safety	I

Hazardous Substances (cont.)			
Impact		Impact	Energy Conservation
1c. Commercial/industrial rel. haz. waste	I		
2. Existing spill sites & leaky fuel tanks	M	1. Increase in operating energy consumption	I
3. Transportation of hazardous waste	I	2. Cumulative energy demands	I
4. Cumulative impacts	I		
Cultural and Historic Resources			
1. Loss or disturbance of significant resources	I		
2. Cumulative development	S		
Legend: S= Significant impact, cannot be mitigated to a less than significant level M= Significant impact, but can be mitigated to a less than significant level I= Insignificant impact U= unknown at this time R= refers to other section of the impact chapter			

Table 2-2
SUMMARY OF SIGNIFICANT IMPACTS

Unmitigated Impacts		
Chapter 5D: Transportation	MITIGATION MEASURES	SIGNIFICANT AFTER MITIGATION
<p>Impact 12: The rural unincorporated area is impacted by cumulative traffic from the rest of the county and the Bay Area. The increase in traffic congestion between 1995 and 2010 is considered to be a significant unavoidable impact.</p>	<p>Mitigation Measure 1: Pricing measures could be implemented to make auto travel more costly and expansion of highway capacity could relieve some bottlenecks, but future congestion is unavoidable.</p>	<p>YES</p>
<p>Chapter 5K: Geology</p>		
<p>Impact 3C: Substantial property damage and loss of life could occur in a major earthquake. This is a significant unavoidable impact.</p>	<p>Mitigation Measure: None feasible.</p>	<p>YES</p>
<p>Chapter 5N: Public Services</p>		
<p>Impact 3: For school districts currently operating at or near capacity, cumulative development would cause a significant impact.</p>	<p>Mitigation Measure 1: Mitigation of cumulative school impacts are beyond the scope of this EIR. School impacts are partially under the control of the cities and County. Development can be mitigated by approving fewer projects. Little growth is due to the Draft 1994 General Plan so further reduction is not feasible.</p>	<p>YES</p>
<p>Chapter 5P: Cultural Resources</p>		
<p>Impact 2: Cumulative development not directly attributable to the Plan could impact cultural resources.</p>	<p>Mitigation Measure 1: None feasible.</p>	<p>YES</p>

Mitigatable Impacts		
Chapter 5A: Land Use	MITIGATION MEASURES	SIGNIFICANT AFTER MITIGATION
<p>Impact 2A: Expansion of USAs by cities and LAFCO could lead to a loss of agricultural land and/or premature urbanization of the fringe of the rural unincorporated area.</p>	<p>Mitigation Measure 1: The cities and County establish 20-year growth limits as recommended in the UGB policy of the Plan.</p> <p>Mitigation Measure 2: LAFCO should deny expansion of commercial development into viable agricultural land, and emphasize in-fill to meet these needs.</p>	NO
<p>Impact 2E: RV parks lead to potential changes in land use patterns, density, public service needs and the potential for growth-inducement in Hillside and RS areas.</p>	<p>Mitigation Measure 1: The County should give high priority to a study of RV park needs and ensure that the appropriate densities and conditions of approval are consistent with the overall goals of the Draft 1994 General Plan.</p> <p>Mitigation Measure 2: Refrain from approving any new or expanded RV parks until the recommended study is complete.</p> <p>Mitigation Measure 3: Abide by the study findings.</p>	NO
<p>Impact 3: Golf courses in agricultural areas have significant land use compatibility impacts including pesticide use, water and other service demands, conservation of agricultural land and growth-inducement.</p>	<p>Mitigation Measure 1: Deny approval for golf courses in areas designated for agriculture.</p> <p>Mitigation Measure 2: If mitigation 1 is not adopted, the County should condition golf course approval on measures that will prevent adjacent lands from converting to high intensity uses.</p> <p>Mitigation Measure 3: Conduct the study called for in proposed policy LU13 to assess the impacts of golf courses.</p>	NO

Chapter 5A: Land Use (continued)	MITIGATION MEASURES	SIGNIFICANT AFTER MITIGATION
<p>Impact 4: The Roadside Service (RS) policies are not sufficiently specified and could lead to inefficient land use patterns.</p>	<p>Mitigation Measure 1: The County should provide criteria for RS site designation to identify areas where RS uses are needed and appropriate.</p> <p>Mitigation Measure 2: Each RS proposal should undergo environmental review to determine its appropriateness.</p>	NO
<p>Impact 5: Hillside designations provide for potential land use conflicts and inappropriate uses.</p>	<p>Mitigation Measure 1: County should define by ordinance the types of uses that "by their nature require remote rural settings."</p>	NO
<p>Chapter 5B: Agricultural Resources and Mineral Extraction</p>		
<p>Impact 2: To the extent that non-agricultural uses occur on subdivided prime agricultural land, this would cause a potentially significant impact.</p>	<p>Mitigation Measure 1: The County should track future non-agricultural projects to determine their effect on prime agricultural land. If the loss is substantial, the County should require project sponsors to build away from prime soils.</p> <p>Mitigation Measure 2: County should evaluate and adopt mechanisms such as impact fees, conservation easements, or purchase of development rights to offset impacts on prime agricultural lands.</p>	NO
<p>Impact 4: Golf courses are permitted in Agriculture (A) zones, and when developed, result in loss of agricultural land, conflicts with adjacent farming uses, and growth-inducing impacts.</p>	<p>Mitigation Measure 1: The study recommended in LU13 should investigate the impacts of golf courses on agricultural lands including growth-inducing impacts and the precedent that would be set.</p> <p>Mitigation Measure 2: Abide by the recommendations of the golf course study to reduce impacts to a level of insignificance.</p>	NO

Chapter 5B: Agricultural Resources and Mineral Extraction (continued)	MITIGATION MEASURES	SIGNIFICANT AFTER MITIGATION
<p>Impact 6: Continued grazing, which is encouraged by the Draft 1994 General Plan, could have a significant impact on the environmental resources that the Draft Plan seeks to protect.</p>	<p>Mitigation Measure 1: The County should investigate the extent of impacts caused by grazing. If impacts are occurring, consider supporting educational measures to encourage good grazing practices.</p>	NO
<p>Impact 7: The proximity of residential uses and productive farmland can lead to incompatibilities between the two uses.</p>	<p>Mitigation Measure 1: For new residential developments in proximity to agricultural lands, buffers should be required to reduce potential conflicts. The effectiveness of buffers should be investigated and be part of the conditions of approval.</p>	NO
<p>Impact 8: Agriculture can impact other land uses and the environment with erosion, high water consumption, groundwater draw down, nitrate loading of groundwater, reduction in species diversity, destruction of archaeological remains, energy consumption, noise odors and other forms of air pollution.</p>	<p>Mitigation Measure 1: These mitigations are discussed in more detail under other topics.</p>	REFERS TO OTHER SECTION OF THE IMPACT CHAPTER
<p>Impact 9: Development on legal lots of record could result in a significant cumulative impact on agricultural lands.</p>	<p>Mitigation Measure 1: County should track the location of building permits issued for legal lots of record and determine if they are causing a loss of agricultural land. If this is a substantial loss, the County shall initiate steps to compensate for this loss.</p>	NO

Chapter 5B: Agricultural Resources and Mineral Extraction (continued)	MITIGATION MEASURES	SIGNIFICANT AFTER MITIGATION
<p>Impact 10: The continued reduction of Williamson Act contracted lands, though not attributable to the Draft 1994 General Plan, is a significant cumulative impact.</p>	<p>Mitigation Measure 1: Urban expansion should be avoided in areas near lands currently under Williamson Act contract. If this is not feasible, the loss of agricultural land should be offset by designating a like amount of land of a similar quality for agricultural use.</p> <p>Mitigation Measure 2: USAs should not be extended into viable farmland. One mechanism to address this is for cities to adopt the UGBs recommended in the Draft 1994 General Plan. The boundaries should be drawn in a manner that protects quality agricultural parcels from urbanization.</p> <p>Mitigation Measure 3: If Williamson Act land is added to a USA or is annexed, the city should require sponsors to cluster development in non-prime lands and enter and maintain prime soils in a Williamson Act contract as a means of offsetting the loss of agricultural land.</p>	<p>NO</p>
<p>Impact 11: Loss of prime agricultural lands and large amounts of other agricultural land attributed to uses permitted on Williamson Act lands is a significant cumulative impact.</p>	<p>Mitigation Measure 1: Refine the list of permitted uses such that they are limited to activities that need to occupy agricultural land and direct their siting to non-prime soils.</p>	<p>NO</p>

Chapter 5B: Agricultural Resources and Mineral Extraction (continued...)	MITIGATION MEASURES	SIGNIFICANT AFTER MITIGATION
<p>Impact 12: Expansion of USAs has the potential to convert substantial amounts of remaining Agriculturally (A) designated lands in the County to urban uses. This is a significant cumulative impact on agriculture.</p>	<p>Mitigation Measure 1: Expansion into the "A" designated lands of the County should not be permitted by LAFCO.</p> <p>OR</p> <p>Mitigation Measure 2: Implement the recommendations of the Agricultural Preserve Study sponsored by the County, Gilroy and LAFCO.</p>	<p>NO</p>
<p>Chapter 5C: Biotic Resources</p> <p>Impact 1: Development within rural unincorporated areas of the County could result in significant direct and indirect impacts on sensitive biotic resources associated with critical habitat areas.</p>	<p>Mitigation Measure 1: Priority should be given to the acquisition of existing lots of record that are so constrained by sensitive resources that no developable land remains.</p> <p>Mitigation Measure 2: In conjunction with the regional Habitat Conservation Plan (HCP), the County should expand Policy R-RC (i) 9(b) to include an educational program and/or brochure aimed at landowners to provide information on the sensitive resources within the HCP area and best management practices (BMPs) appropriate for the preservation of biotic resources.</p>	<p>NO</p>
<p>Impact 2: The expansion of USA boundaries into unincorporated land could increase degradation of critical habitat areas and sensitive biotic resources as a result of urbanization.</p>	<p>Mitigation Measure 1: The cities should refrain from expansion of the USAs into critical habitat areas unless the incorporated land is designated for non-urban uses or dedicated as open space.</p> <p>Mitigation Measure 2: To be effective, the UGBs policy should be adopted by the cities and County.</p>	<p>NO</p>

Chapter 5C: Biotic Resources (continued)	MITIGATION MEASURES	SIGNIFICANT AFTER MITIGATION
<p>Impact 3: Population growth in the County would increase recreational use and/or development of existing public lands for recreational and other purposes. This could result in significant impacts to sensitive resources within these areas.</p>	<p>Mitigation Measure 1: The County should develop and implement Resource Management Plans for all public lands under its jurisdiction. These plans should outline preservation measures and mitigation for impacts. The County shall establish a monitoring program to assure that impacts have been avoided or mitigated.</p>	NO
<p>Impact 4: Removal of riparian resources or lack of buffer areas between riparian habitat and development would cause a significant impact.</p>	<p>Mitigation Measure 1: To strengthen the protection of riparian resources, Policy R-RC 37 addressing riparian corridor buffers should be adopted as an ordinance.</p> <p>Mitigation Measure 2: A long-term management plan for the protection and enhancement of the riparian systems of Santa Clara County should be developed in cooperation with other agencies.</p>	NO
<p>Impact 5: Free access to riparian areas by domesticated and/or feral animals species can result in significant impacts to riparian resources. Screening with walls and fences can reduce the value of riparian areas as migration and movement corridors for wildlife.</p>	<p>Mitigation Measure 1: The County should require new development adjacent to riparian areas to be visually compatible with the natural landscape.</p> <p>Mitigation Measure 2: The County should establish criteria for screening/fencing that can be applied to various situations and will be appropriate to the land uses and resources in the vicinity.</p> <p>Mitigation Measure 3: Through cooperative educational efforts, reduce the damage that domesticated animals cause to riparian areas by providing exclosures, off-stream water sources and/or managed access to streams.</p>	NO

Chapter 5C: Biotic Resources (continued)	MITIGATION MEASURES	SIGNIFICANT AFTER MITIGATION
<p>Impact 6: Potential impacts to freshwater marsh habitats could result from development in the unincorporated areas.</p>	<p>Mitigation Measure 1: Revise Policies R-RC 31-38 to explicitly provide protections to freshwater habitats in addition to creeks and streams.</p>	<p>NO</p>
<p>Impact 7: Grazing could have a significant impact on riparian areas.</p>	<p>Mitigation Measure 1: Establish a policy to encourage a cooperative effort between the ranchland owners, County, state and federal agencies to develop BMPs for the reduction of grazing impacts on riparian areas.</p>	<p>NO</p>
<p>Impact 8: Over-grazing can result in a substantial decrease in the overall level of plant and animal diversity within the County.</p>	<p>Mitigation Measure 1: Encourage implementation of measures to improve the habitat value of grasslands through an educational and cooperative program.</p>	<p>NO</p>
<p>Chapter 5D: Transportation</p>		
<p>Impact 3: Motor homes, recreational vehicles and trucks are larger and heavier than most rural roads were designed to carry on a regular basis. Large vehicles will have an increased and significant impact on rural roads.</p>	<p>Mitigation Measure 1: The County should use signage to detour heavy vehicles from roads that were not designed to carry them.</p>	<p>NO</p>

Chapter 5D: Transportation (continued...)	MITIGATION MEASURES	SIGNIFICANT AFTER MITIGATION
<p>Impact 4: Most unincorporated areas developed in a piecemeal fashion, often resulting in substandard roads and road patterns. This is a significant safety impact.</p>	<p>Mitigation Measure 1: The County should undertake a comprehensive transportation plan that consolidates all of the policies and recommendations in the Draft 1994 General Plan. The plan should identify impacted locations and measures to eliminate or reduce them. The County should prioritize the improvements and allocate resources to make them.</p> <p>Mitigation Measure 2: Future development projects should be evaluated for their potential to exacerbate substandard road conditions and be required to contribute their fair share of improvement costs. Impacts from new development cannot be fully mitigated without addressing existing conditions as part of the solution.</p> <p>Mitigation Measure 3: The County should investigate funding sources to address existing roadway improvements that cannot be funded through impact fees on new projects.</p>	<p>NO</p>
<p>Impact 5: Roadway improvements can have significant impacts on the environment that may be beyond feasible mitigation.</p>	<p>Mitigation Measure 1: Implementation of the Draft 1994 General Plan policies would help reduce the impacts of road construction. Mitigation of these impacts can only be determined after the required environmental review of these improvement projects.</p>	<p>UNKNOWN</p>

	MITIGATION MEASURES	SIGNIFICANT AFTER MITIGATION
<p>Chapter 5D: Transportation (continued...)</p>		
<p>Impact 6: Conflicts associated with agricultural uses and through traffic in rural areas can result in significant safety impacts and harm to farm vehicles and livestock.</p>	<p>Mitigation Measure 1: Where feasible, design and/or reconfigure roads to have shoulders for farm vehicles and/or livestock.</p> <p>Mitigation Measure 2: Where conflicts are most intense, consider measures to separate through-traffic from farm vehicles with roadways or detours.</p> <p>Mitigation Measure 3: Discourage land use decisions that increase the likelihood of conflicts between agriculture and users of rural roads.</p>	<p>NO</p>
<p>Impact 10: If a new or expanded airport is proposed in the future, it could result in significant impacts.</p>	<p>Mitigation Measure 1: Abide by policies and regulations discussed in the Aviation Safety chapter of this EIR.</p>	<p>UNKNOWN</p>
<p>Impact 11: Cumulative increases of traffic volumes on rural roads is a significant impact:</p>	<p>Mitigation Measure 2: Undertake environmental review of any proposed new or expanded airport and abide by the recommendations to reduce impacts.</p> <p>Mitigation Measure 1: Mitigations from Impact 4 apply to cumulative traffic volume impacts.</p> <p>Mitigation Measure 2: Require an EIR on the transportation plan recommended in the mitigation for Impact 4, and abide by the mitigation measures to reduce the impacts.</p>	<p>UNKNOWN</p>
<p>Chapter 5E: Noise</p>		
<p>No significant unavoidable, significant, or potentially significant noise impacts were identified.</p>	<p>NOT APPLICABLE</p>	<p>NOT APPLICABLE</p>

Chapter 5F: Climate and Air Quality	MITIGATION MEASURES	SIGNIFICANT AFTER MITIGATION
No significant unavoidable, significant, or potentially significant climate and air quality impacts were identified.	NOT APPLICABLE	NOT APPLICABLE
Chapter 5G: Housing		
No significant unavoidable, significant, or potentially significant housing impacts were identified.	NOT APPLICABLE	NOT APPLICABLE
Chapter 5H: Visual Aesthetics		
Impact 1:		NO
Golf courses and some agricultural uses can have significant visual impacts.	<p>Mitigation Measure 1: Limit golf courses to areas that are not visually prominent and can be screened from view.</p> <p>Mitigation Measure 2: Require landscaping with native species so the appearance of golf courses blend in with natural features of the environment.</p> <p>Mitigation Measure 3: Encourage farmers to screen unsightly buildings, equipment and areas using native plants.</p>	
Chapter 5I: Hazardous Substances		
Impact 2:		NO
Some of the existing spill sites and leaky fuel tanks located in the unincorporated areas will continue to exist during the life of the Draft General Plan. This could cause significant impacts.	<p>Mitigation Measure 1: The location of contaminated sites should be mapped, described and keyed to land use designations in the Draft 1994 General Plan to identify areas of potential development that are at risk.</p> <p>Mitigation Measure 2: Prevent public exposure to hazardous sites through existing programs.</p>	

Chapter 5J: Aviation Hazards	MITIGATION MEASURES	SIGNIFICANT AFTER MITIGATION
No significant unavoidable, significant, or potentially significant aviation hazards impacts were identified.	NOT APPLICABLE	NOT APPLICABLE
Chapter 5K: Geology		
See First page of this table.	NOT APPLICABLE	NOT APPLICABLE
Chapter 5L: Flood Hazards		
Impact 1: Flooding will occur in South County. This is a significant impact.	Mitigation Measure 1: Prepare and implement an up-to-date flood control master plan for South County to identify and prioritize necessary flood control improvements.	NO
Impact 4: The lack of adequate comprehensive local drainage facilities would cause significant impacts on new and existing developments.	Mitigation Measure 1: Prepare and implement an up-to-date drainage master plan to identify necessary drainage improvements.	NO
Chapter 5M: Water Supply and Wastewater		
Impact 2: Groundwater from municipal and private water supply wells in South County have been found to contain nitrates at levels greater than allowed by federal safe drinking water standards.	Mitigation Measure 1: The County should review the results of the South County Nitrate Study and implement the nitrate management plan with SCVWD and other jurisdictions.	NO

Chapter 5N: Public Services	MITIGATION MEASURES	SIGNIFICANT AFTER MITIGATION
<p>Schools</p>		
<p>Impact 1: Increased school enrollment from the rural unincorporated area would have a significant impact on schools that are already overcrowded.</p>	<p>Mitigation Measure 1: County should more clearly define how project approvals can be conditioned under Policy C-GD 54 to mitigate school impacts.</p> <p>Mitigation Measure 2: Developer fees should be combined with funding mechanisms such as Mello-Roos Community Facilities Districts, supplemental fees from developers, school construction funded jointly by public agencies, or dedication of sites or site improvements by developers in order to compensate for the shortfall in funding for schools.</p>	<p>NO</p>
<p>Parks and Recreation</p>		
<p>Impact 2: To the extent that cumulative development cause increased use of park facilities which are presently over-utilized, there would be a significant impact.</p>	<p>Mitigation Measure 1: County parks departments should monitor use of facilities to determine how this correlates with cumulative residential development. If facilities are over-utilized, future development should be required to implement existing park plans with regard to provision of lands, facilities and funding.</p> <p>Mitigation Measure 2: The various parks departments should encourage use of less utilized parks in the County.</p>	<p>NO</p>
<p>Chapter 5O: Energy</p>		
<p>No significant unavoidable, significant, or potentially significant energy conservation impacts were identified.</p>	<p>NOT APPLICABLE</p>	<p>NOT APPLICABLE</p>

Chapter 5P: Cultural Resources	MITIGATION MEASURES	SIGNIFICANT AFTER MITIGATION
Unmitigated Impacts (see page 2-1).	NOT APPLICABLE	NOT APPLICABLE

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4-12

CHAPTER 3 PROJECT DESCRIPTION

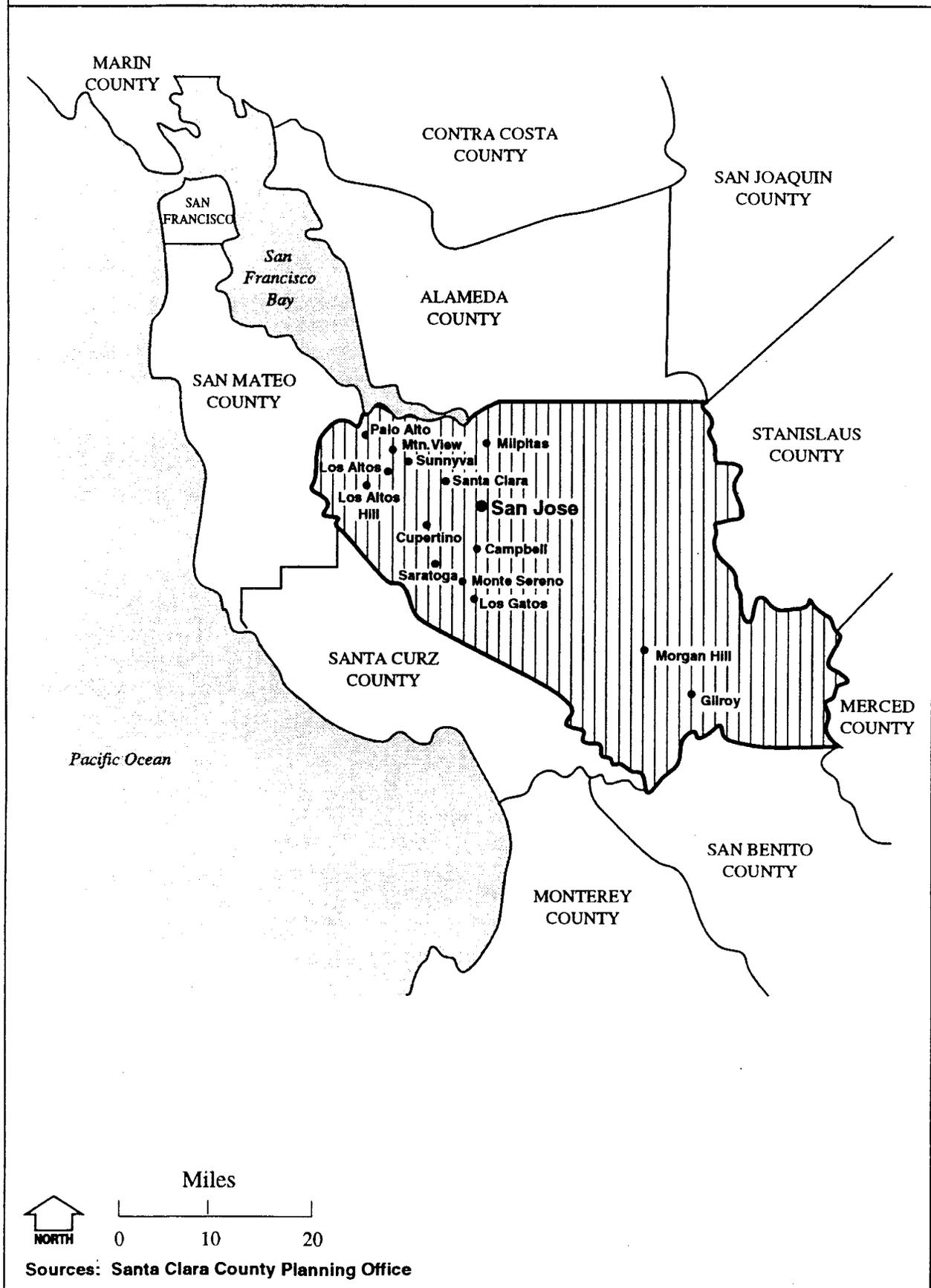
A. Santa Clara County Planning Area

1. **Geographic Location.** Santa Clara County is located at the southern end of the San Francisco Bay Area and shares boundaries with Alameda County to the north, Stanislaus and Merced Counties to the east, San Benito County to the south, and Santa Cruz and San Mateo Counties to the west (see Figure 3-1). The County encompasses over 1,300 square miles of territory, or approximately 832,000 acres. The largest city is San Jose. The County is world famous as the location of Silicon Valley.
2. **Physical Features.** Santa Clara County is bordered on the west by the Santa Cruz mountains and on the east by the Diablo range. The Santa Cruz mountains includes rolling grasslands and wooded foothills adjacent to the valley with some steep slopes and dense forest lands. The Diablo range includes about half of the County's land area. Most of the land is composed of grasslands and brush and is largely unaccessible. Both the Diablo and Santa Cruz ranges include active earthquake faults and areas of slope instability. Between these two ranges lies the Santa Clara Valley. In the northern portion of this valley are 13 of the County's 15 cities and the majority of its residents. Bay lands adjacent to San Francisco Bay border along the northwestern edge of the County. They include open waters, salt evaporation ponds, and marshlands. The southern portion of the valley is mostly rural, with the exception of the cities of Gilroy and Morgan Hill. The unincorporated community of San Martin also lies in South County.
3. **Predominant Land Use Patterns.** The Plan addresses two basic land use patterns within the County: urban and the rural. The lands within the County's planning jurisdiction are briefly described in the County Profile section of the Draft 1994 General Plan.

At the northern tip of the County are San Francisco Bayland and other open space public lands (PL). These bay wetlands are primarily used for wildlife conservation, salt extraction, and low intensity recreational uses. The National Wildlife Refuge on the southern shores of San Francisco Bay is in the Pacific Flyway.

Within the Santa Clara Valley, the density of development is influenced by the corridors formed by Highways 85, 101, 17/880, 280 and 680. Radiating out from these major highways are the most intense areas of development within the County. Thirteen of the 15 cities in the County are clustered around these corridors in the northern portion of the valley, including the largest

Figure 3-1 Regional Location



of the cities, San Jose. (see Figure 3-2) The southern portion of the valley includes the cities of Morgan Hill, Gilroy and the unincorporated area of San Martin. The growth of these urban areas is also influenced by Highway 101. South County contains large and medium scale Agricultural lands, Ranchlands and some Rural Residential areas.

To the west of the valley are the foothills of the Santa Cruz mountains. These are primarily designated as Hillside areas and Public Lands. Much of this area is relatively unstable and heavily wooded. It is primarily open space lands. Along the County's eastern border are large parcels designated as Ranchlands and some largely inaccessible Public Lands. Principal land uses found in the Santa Cruz mountains to the west of the valley and the Diablo Range east of the valley include undeveloped open space in public and private ownership, forest and timber lands, grazing and ranching, mineral extraction, other resource-based land uses, and low-density single family residential development.

4. Jurisdictions in the County. To understand the County's land use controls and the Draft 1994 General Plan, it is necessary to understand the jurisdictional authorities in the County as a whole. There are 15 incorporated cities that have land use authority within their own boundaries. In and around the cities are unincorporated lands that are part of their urban service areas (USAs), including "islands" and "pockets". These areas are planned to receive urban services and be annexed to the city within five years or less. Therefore, the County does not assign County General Plan land use designations to these urban unincorporated lands. The County does assign zoning districts consistent with the general plans of the cities. This EIR does not address impacts in the cities or their USAs. It does address rural and urban unincorporated areas over which the County has land use control, with the exception of Stanford University and San Martin.

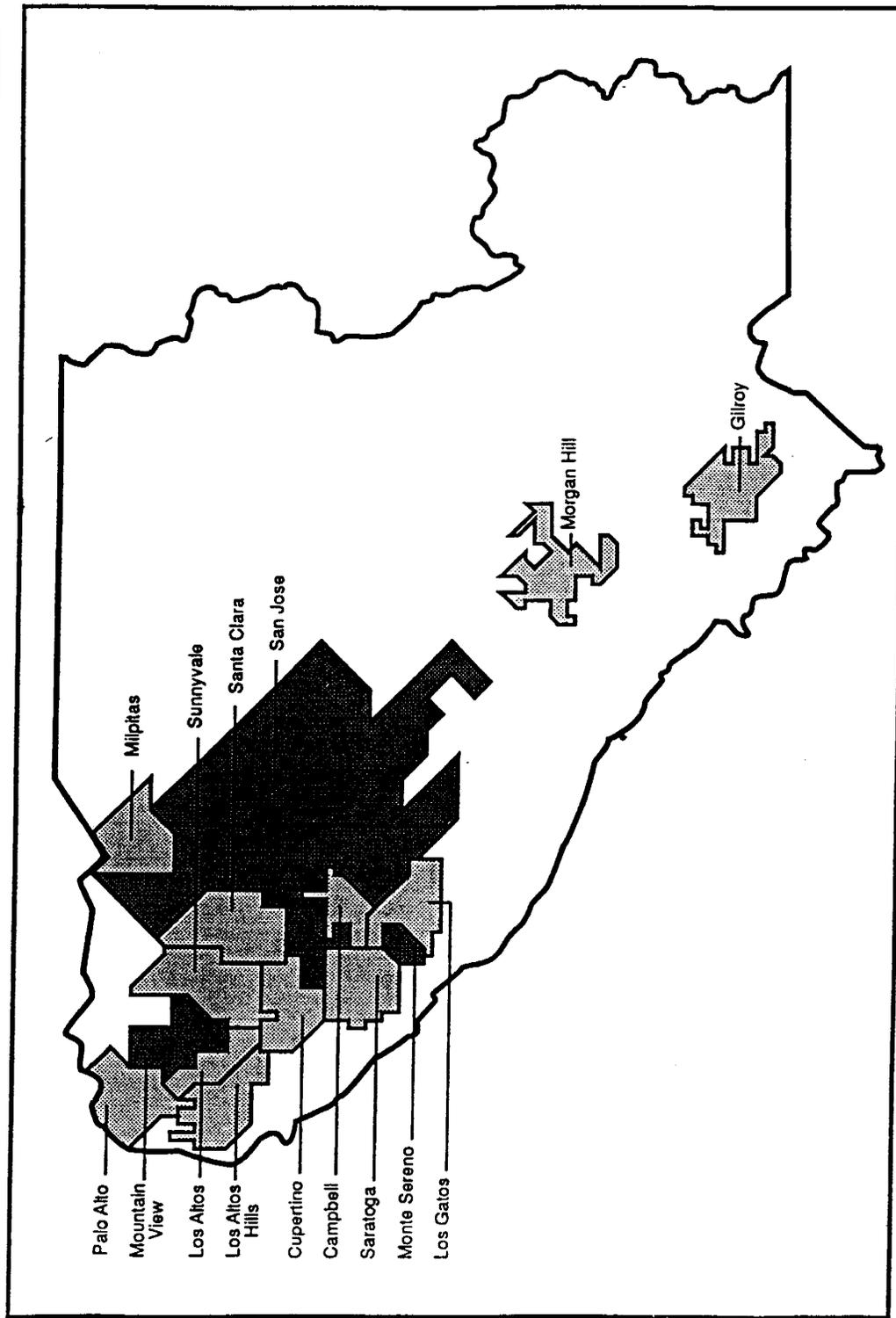
Stanford University's land use and development are governed by joint agreements between the County, the City of Palo Alto, Stanford University and a Use Permit that has been issued through the zoning ordinance of the County. This EIR does not address potential impacts associated with Stanford University because they are addressed in the EIR prepared for the Stanford University General Use Permit. The interested reader is referred to that document for information and the impacts of Stanford's Use Permit.

San Martin is a South County community that is unincorporated. The General Plan recognizes this as a Special Area with it's own set of policies expressed in the South County Joint Land Use Plan. That plan has its own EIR, and is not evaluated in this EIR.

B. Characteristics of the Draft 1994 General Plan

The Draft 1994 General Plan provides goals, strategies, policies and implementation measures intended to guide growth and resource protection within the Santa Clara County planning area

Figure 3-2 Location of Cities



 NORTH
NO SCALE

Sources: Santa Clara County Planning Office

Planning Analysis & Development

through the year 2010. The Draft Plan is an update of the County's existing (1980) General Plan, and retains the majority of its policies, objectives, and land use designations. The Draft 1994 General Plan would accommodate growth within the County, which is expected to occur at a slower rate than has occurred since 1980 when the last plan was adopted. The characteristics of the Draft 1994 General Plan that most obviously differentiate it from its predecessor are the inclusion of a vision statement and a reorganization based on the three main geographic areas addressed by the plan: (1) County as a whole, (2) rural unincorporated areas, and (3) urban unincorporated areas. This section of the EIR provides an overview of the types of changes made to the 1980 General Plan in producing the Draft 1994 General Plan. Please refer to Chapter 5A, Land Use, for further discussion of the Draft 1994 General Plan's relationship to the 1980 General Plan.

1. **Vision Statement.** The vision statement for the Draft Plan collects in one place all the fundamental goals toward which the plan is directed. The vision statement asserts that solutions to planning problems must cut across issues. For example, transportation solutions must consider growth management, open space preservation and air quality goals. The vision statement underscores that viable solutions to metropolitan problems must be mindful of the effects of plan policies on overall quality-of-life issues. By addressing the goals of the Plan collectively and comprehensively, it makes possible for the Plan users to see that growth management, transportation, energy efficiency, housing and environmental goals are clearly related. The vision statement is articulated through several themes, including:

- Social and Economic Well-Being
- Managed, Balanced Growth
- Livable Communities
- Responsible Resource Conservation

Each of these themes is further expanded through statements of strategies for planning and growth in the County. The policies and measures recommended to implement the strategies are, in large part, grounded in environmental values.

2. **Organization of the Draft 1994 General Plan.** The organization of the Draft 1994 General Plan is in part a reflection of the need to make the document easier to use and understand with regard to three planning areas: the County as a whole, rural unincorporated areas, and urban unincorporated areas. In recognition of the three geographic areas for which the County has established General Plan policies, the Draft 1994 General Plan is divided into three primary sections, or parts, addressing:

- Countywide Issues & Policies;
- Rural Unincorporated Area Issues & Policies; and,
- Urban Unincorporated Area Issues & Policies.

The primary focus of this EIR is the policies that govern land use and development within the Rural Unincorporated Areas, as those are the lands over which the County exercises direct land use planning and regulatory authority. However, there are certain policies addressing countywide issues which are fundamental to policies for the rural unincorporated area. The best example is that of the "joint urban development policies," which are contained in the Countywide "Growth & Development" chapter of the General Plan. These policies articulate the 20 year old agreement between the cities, County and LAFCO that urban development may occur only within cities' Urban Service Area's (USAs) in accordance with cities' schedule for urbanization and ability to provide necessary infrastructure. The corollary of these policies, that outside city USAs, the County will not permit urban development of the type or density that should only occur within cities, is expressed within the Rural Unincorporated Areas section of the General Plan regarding Growth & Development. These policies are fundamental to the Land Use element of the Draft 1994 General Plan. This element defines allowable rural land uses and non-urban, low densities of development permitted within the County's land use jurisdiction.

Part One of the Draft 1994 General Plan contains the User's Guide to the Plan, which elaborates on the intent, function, and primary audience or users of each major section mentioned above. It also contains the Summary of the plan, outlining fundamental policies, the Vision Statement, and a brief background section titled "County Profile." The latter primarily describes general demographic and geographic information of a countywide nature.

Part Two contains the Countywide Issues & Policies of the Plan (referred to as "elements" by State law). These chapters contain policies which in some cases are binding on all jurisdictions within the County, such as the urban development policies. Other policies are advisory and are intended to provide direction on a sub-regional basis to all jurisdictions whose collective plans and decision-making authority have an effect on the quality of life of Santa Clara County.

The countywide issues and policies address land use, development, and conservation issues throughout the County. The following topic areas are covered:

- Growth and Development
- Economic Well-Being
- Social Well-Being
- Housing
- Transportation
- Parks and Recreation
- Resource Conservation
- Health and Safety
- Governance

Part Three contains Rural Unincorporated Issues & Policies, including the Land Use Plan and Policies. These chapters and policies are primarily intended for use by County decision-makers, land owners, residents, County agencies and staff, and others that have need of understanding the policies most directly affecting land use and development outside cities' Urban Service Areas under County jurisdiction.

Rural Unincorporated Area Issues & Policies addresses land use, development, and conservation issues. This volume contains chapters addressing the following topics:

- Growth and Development
- Housing
- Transportation
- Parks and Recreation
- Resource Conservation
- Health and Safety

Development in rural unincorporated areas would be required to comply with the policies set forth in this volume.

Part Four Urban Unincorporated addresses the Urban Unincorporated Areas for which the County exercises some degree of land use authority. The two chapters on General Land Use Management of urban unincorporated areas and on Stanford University elaborate of the extent of County planning authority and articulate the basic policy directions of the County regarding these areas.

Part Five contains the "South County Joint Area Plan" that was jointly prepared and adopted in 1988-89 by amendment to the general plans of the County, City of Gilroy, and City of Morgan Hill. These policies are intended to assure greater consistency between the policies and decision-making of the three jurisdictions having the most influence over the future of the urban and rural areas south of the major metropolitan region. No revisions were proposed to this body of policies as a result of the General Plan review process, and the South County Plan is not addressed in this EIR.

Part Six of the Plan contains the Appendices, including the 1993 Housing Element Technical Update, the Open Space Preservation Action Program, and General Plan Administration policies. The Housing Element technical update is not evaluated in this EIR.

C. Focus of the EIR

1. **Rural Unincorporated Issues and Policies.** For two reasons, this EIR focuses on impacts associated with the Rural Unincorporated Area Issues and Policies volume. First, the

policies in this volume would directly affect areas that are within the County's jurisdiction, unlike policies in the Countywide Issues and Policies volume. The countywide policies, while intended to guide growth throughout the County, are advisory to the land use decisions of incorporated cities. Secondly, the Rural Unincorporated Area Issues and Policies volume contains policies that represent the most change from the County's existing General Plan. (see "Changes From Existing General Plan" below).

2. Assumptions Underlying the Plan. There are a number of assumptions underlying the plan and EIR with which the reader should be familiar. Each of these are discussed below.

- a. The levels of development expected to occur in the rural unincorporated areas between 2005 and 2010 will be similar in amount and location to development trends between 1980-1993.
- b. The level of development on existing legal lots of record will continue at the rate experienced in the recent past, i.e., 1980-1993. Although this development is not attributable to approvals made under the General Plan, it will affect cumulative impact analysis in the EIR.
- c. Agriculture and other open space uses, while encouraged by the plan, do have environmental impacts that will be addressed at a general plan level of detail.
- d. The future location of non-residential land uses is difficult to determine although it is most likely to occur along transportation corridors because good vehicular access is generally important to non-residential uses. Utilities are the exception, since they are scattered throughout the open areas of the County. While the EIR estimates the level of such development based on experience in the recent past, it does not speculate on the location of such growth beyond proximity to transportation corridors. Most of the remaining parcels that may be developed are in proximity to San Martin. There are some additional areas to the north, and east of San Martin that may also be developed.

3. Growth Projections. The growth projections used in this EIR have three components:

- a. Residential subdivisions in the rural unincorporated area under the land use control of the County. These are part of the primary impact generating uses that are likely to be permitted under the Draft 1994 General Plan.
- b. Non-Residential uses in the unincorporated area under the land use control of the County. These also are part of the primary impact generating uses likely to be permitted under the Draft 1994 General Plan.

- c. Single-family residential building permits on legal lots of record over which the County does not have discretionary approval authority. This type of development is used to estimate cumulative impacts in the unincorporated area. It may overstate potential growth levels to the extent that it includes development on subdivided lots that are already counted in item (a) above.

To estimate growth under the Draft 1994 General Plan, the overall growth rates from the 1980-1993 period were annualized by dividing the total number of projects by the number of years for which data is available. This annual growth rate is then multiplied by the 15 years in the planning horizon of the Draft 1994 General Plan.

The growth projected for the next 15 years is as follows:

	<u>Annual</u>	<u>Total</u>
New Residential Lots Created Through Subdivisions	26.7	400
Non-Residential Projects	9.1	137
Cumulative Single Family Residential Units	160.0	2,400*

* = Located both in urban and rural unincorporated areas

Source: Santa Clara County Planning Office

4. Key Strategies. Each of the Draft 1994 General Plan chapters contains a series of strategies and policies, followed by implementation recommendations for the policies. The following discussion briefly reviews the key land use and growth management strategies from both the Countywide Issues & Policies and the Rural Unincorporated Issues and Policies volumes of the Draft 1994 General Plan. Other strategies, as well as accompanying policies and implementation measures, are discussed in the topical chapters of the EIR.

The Growth and Development chapter for Countywide Issues and Policies recommends three over-arching strategies for accommodating future urban growth:

Strategy 1: Promote compact urban form and development patterns;

Substrategy (a): Manage urban expansion.

Substrategy (b): Make more efficient use of land in existing urban areas.

Strategy 2: Achieve more balanced urban growth and development.

Strategy 3: Improve coordinated, countywide planning.

These strategies are designed to promote the goals expressed in the Vision Statement for the Draft 1994 General Plan related to managed, balanced growth. They guide expression of specific plan policies regarding open space preservation, affordable housing, retention of agricultural lands, traffic congestion, fiscal impacts and a variety of other planning issues. They are integral to successful implementation of the Draft 1994 General Plan policies for the rural unincorporated area.

The Growth and Development chapter for Rural Unincorporated Area Issues and Policies recommends two basic strategies for managing rural unincorporated area growth and development:

Strategy 1: Preserve the resources and rural character of lands outside Urban Service Areas (USAs).

Strategy 2: Develop special area plans for areas that require or would benefit from more detailed planning and policies.

To achieve these aims, the Draft 1994 General Plan requires non-urban, low-density uses in the rural unincorporated areas of the County.

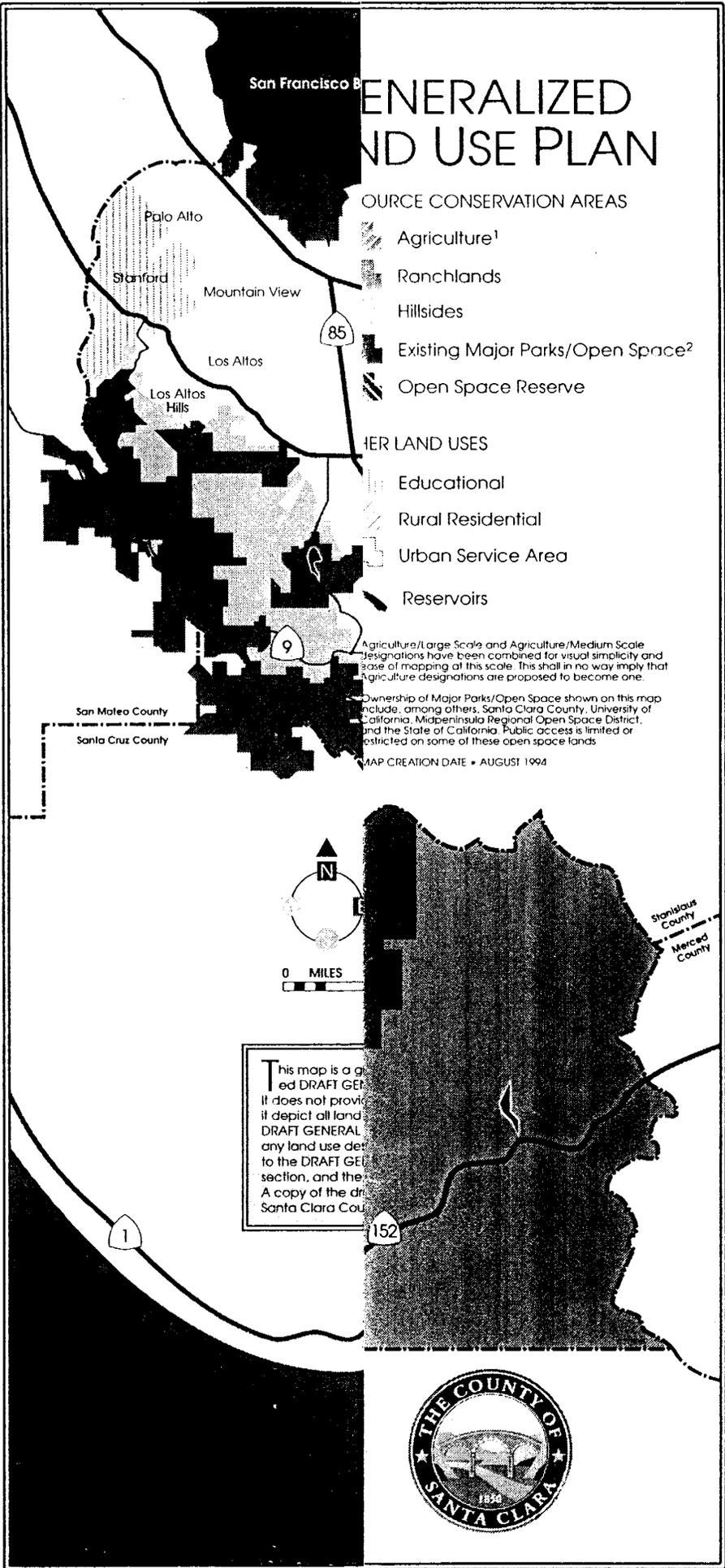
5. Land Use Map and Designations. The Draft 1994 General Plan Land Use Map represents a clear and graphic expression of the proposed land use pattern within the Santa Clara County planning area, consistent with the text of the Draft 1994 General Plan. Figure 3-3 illustrates the Generalized Land Use Plan. (For information pertaining to the number of acres within each land use category, please refer to Table 5A-10 in the Land Use chapter).

Land use designations shown on the Draft 1994 General Plan map are expressed in terms of four major categories: Resource Conservation, Rural Residential, Other Land Uses, and Areas with Special Land Use Policies. The issues and policies are discussed in more detail in the Land Use Plan sections of the Rural Unincorporated part of the Draft 1994 General Plan. The four land use categories are subdivided into more specific land use designations, as discussed below:

Resource Conservation

These areas consist primarily of mountains, wetlands and agricultural lands. The density and type of development permitted here would be strictly controlled to protect and preserve the natural resources and qualities of these lands. There are seven types of land use designations associated with Resource Conservation Areas:

- Baylands
- Agriculture
- Hillsides



GENERALIZED LAND USE PLAN

SOURCE CONSERVATION AREAS

- Agriculture¹
- Ranchlands
- Hillsides
- Existing Major Parks/Open Space²
- Open Space Reserve

OTHER LAND USES

- Educational
- Rural Residential
- Urban Service Area
- Reservoirs

¹ Agriculture/Large Scale and Agriculture/Medium Scale designations have been combined for visual simplicity and ease of mapping at this scale. This shall in no way imply that Agriculture designations are proposed to become one.

² Ownership of Major Parks/Open Space shown on this map include, among others, Santa Clara County, University of California, Midpeninsula Regional Open Space District, and the State of California. Public access is limited or restricted on some of these open space lands.

MAP CREATION DATE • AUGUST 1994

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- Ranchlands
- Open Space Reserve
- Existing Regional Parks
- Other Public Open Space Lands

Baylands include the National Wildlife Refuge, parks, salt ponds, marshes, public solid waste disposal facilities, wildlife habitat, public educational facilities and harbors. Allowable uses on the edge of San Francisco Bay include bay waters and sloughs; marshes, wetlands and wetland restoration; salt extraction; wildlife habitat; open space preserves; small piers and walkways; wildlife observation; and recreation such as walking, hiking, fishing, and bicycling.

Agriculture land is found primarily along the flat valley floors. These lands have Class I, II or III soils and have generally been in agricultural production. Allowable uses are agriculture and ancillary uses; uses necessary to support agriculture, and other compatible uses that enhance the long-term viability of agriculture. Allowable densities would be 40-acre minimum parcel size in the Agriculture Large Scale (Al) designation, which generally applies to the agricultural preserve of South County. A 20-acre minimum parcel size would be permitted in the Agriculture - Medium Scale (Am) designation.

Hillsides are found in much of the western unincorporated County along the Santa Cruz Mountains and along the western most ridge of the Diablo Range. These areas are unsuitable for urban development due to steep slopes and instability hazards. They are watersheds, and provide important resources including minerals, forests, plant and wildlife communities, historic and prehistoric archaeological sites, grazing and recreational areas and scenic resources that define the setting of urban areas. Allowable uses include low density residential uses and other low intensity uses directly related to the resources in the area. Allowable residential densities are 160 acres per dwelling, unless development is proposed as a "cluster" project which allows densities of 20-160 acres per dwelling, depending on the average slope.

Ranchlands are found in much of eastern unincorporated Santa Clara County along the Diablo Range. Like the Hillside areas, Ranchlands are unsuitable for urban development because they contain many important natural resources. These lands are so designated to preserve existing large ranches and grazing. In order for them to be viable operations, large parcel sizes are necessary. Therefore, lands with Ranchland designation have limits placed on the amount of new subdivisions that can be approved. Allowable residential densities are either 160 acres per dwelling, or 20-160 acres per dwelling depending on the slope density. Major land divisions of more than four parcels at one time are not permitted, and no parcel less than 20 acres may be created. In addition, there are limits placed on the number of total parcels that can be created in a one or three year period within the Ranchland designation (see Ranchland Policies in the Draft 1994 General Plan).

Open Space Reserve is applied to certain lands adjacent to the Urban Service Areas of Gilroy and San Jose. This is as an interim category of land use pending study of future urban development patterns and open space preservation. Allowable uses are restricted to agricultural and open space (no commercial uses allowed). Allowable densities are no less than 20 acres per dwelling.

Existing Regional Parks is a land use designation that applies to parks of the County, cities and state government.

Rural Residential

These areas are lands outside of the cities' Urban Service Areas and are not planned for inclusion in them. In designated Rural Residential areas, there is an established pattern of small, primarily developed parcels of greater density than typifies rural development but less than urbanized areas. The primary use of the land is residential, although agriculture and open space are permitted. Commercial, industrial and institutional uses are permitted only if they serve the needs of residents and result in a net reduction in travel demand. Residential densities generally exceed one dwelling unit per ten acres, and densities of one unit per 5-20 acres are permitted, depending on the slope density formula.

Other Land Uses

These include the following:

- Major Educational and Institutional Uses
- Major Public Facilities
- Major Gas and Electric Utilities
- Transportation
- Roadside Services
- Solid Waste Disposal Sites
- Industrial Facilities

Areas with Special Land Use Policies

These areas have special land use policies because of publicly-initiated General Plan Amendments or in response to development pressure outside the Urban Service Area of a city. These areas include:

- Guadalupe Watershed Area of Critical Concern
- Los Gatos Watershed Area
- Los Gatos Hillside Specific Plan Area
- New Almaden Historic Area
- San Martin Planning Area, San Martin Industrial/Commercial Use Permit Area
- Monterey Highway Use Permit

The 1980 General Plan included the East Foothills Policy Area as one of the areas with Special Land Use Policies. This category is proposed to be "phased out" in the Draft 1994 General Plan because it is a cumbersome set of policies to administer and it is inconsistent with other density requirements established by the General Plan. This change is evaluated in the Land Use chapter of the EIR.

6. Changes from Existing General Plan. The Draft 1994 General Plan is largely based on the policies of the County's existing (1980) General Plan, and the overall goals and objectives of the two documents are similar. Changes proposed by the Draft 1994 General Plan consist of the following:

Reorganization

The existing General Plan is organized by topical area (e.g., natural environment, constructed environment, housing, transportation), and does not separate policies for the County as a whole from those for the unincorporated rural areas. The Draft 1994 General Plan proposes a revised format organized by geographical area and governmental jurisdiction. The proposed plan is divided into three volumes: 1) Countywide Issues and Policies, which addresses topical areas such as growth and development, housing, and transportation for the County as a whole; 2) Rural Unincorporated Area Issues and Policies, which addresses these topics for areas that are unincorporated and outside the Urban Service Area (USA); and 3) Urban Unincorporated Area Issues and Policies which focus on unincorporated lands in the USA.

Stronger Environmental Protection

As compared with the existing General Plan, the proposed Draft 1994 General Plan would strengthen environmental protection in rural unincorporated areas. Proposed measures include the delineation of natural resources and use of this information to establish long-term growth limit lines around cities (see Chapter 5A, Land Use, for more discussion); reducing the amount of Rural Residential development that can occur; and phasing out certain types of development in the East Foothills area. Details of this additional protection are provided in Chapters 5A-5P.

Main Changes to Land Use Designations

The Draft 1994 General Plan generally preserves the land use designations of the existing General Plan. Examples of proposed changes cited previously include "phasing out" of the East Foothills Policy Area designation and deletion of the Quarries and Communications/Utilities designations from the Land Use Map policies. The streamside designation was deleted. Streamside protection policies are contained in the Draft 1994 General Plan, Resource Conservation Chapter, Habitat and Biodiversity Section.

Changes in Special Planning Areas

Since the 1980 General Plan was adopted, there have been several general plan amendments and changes in planning area boundaries. The 30 general plan amendments that have been

approved, are shown in the Land Use chapter of this EIR. In addition, there have been annexations and sphere of influence boundary changes that affect the lands under County control, particularly in Gilroy.

Other Plans and Policies

A number of other plans and policies have been adopted since the 1980 General Plan that affect land use and other issues in Santa Clara County. These include the T2010 Transportation Plan, the Hazardous Waste Management Plan, and the 1991 Clean Air Plan. The Draft 1994 General Plan reflects the goals and policies of these plans and incorporates their provisions as appropriate. These plans are discussed under the relevant topic chapters of this EIR.

This EIR addresses the environmental impacts of these policy and land use map changes in Chapter 5A, Land Use. Each impact section 5A-5P, discusses relevant plan policies relating to the additional environmental protection afforded by the Draft 1994 General Plan. Table 3-1 is an overview of the most significant revisions from the 1980 General Plan. The goal was to produce a General Plan based on a vision of the future desired; to revise the 1980 plan to bring it up-to-date; to make the new plan easier to use by restructuring its contents; and, to increase the implementation of the Draft 1994 General Plan.

D. The Planning Process

1. Overview of the Process.

The County's General Plan Review Program (GPRP) consisted of three formal phases. Phase 1 consisted of synthesizing recommendations for revising the Plan collected from three sources:

- a. Extensive comment solicited from the public through a 1989 survey regarding the General Plan.
- b. Planning Department staff recommendations.
- c. The recommendations of a 10-member Steering Committee to produce a Work Program for Phase 2 of the General Plan.

Once the Work Program recommendations were formally adopted by the Board of Supervisors, Phase 2 began, consisting of the appointment of a 24-member General Plan Review Advisory Committee (GPRAC) to oversee substantive revisions to the policies of the Plan. The GPRAC was expanded to 31 members in 1992 to more accurately reflect the demography of the County's overall population. The GPRAC met monthly from May of 1991 to June of 1994, reviewing and discussing the entirety of the revised General Plan, its policies and implementation

TABLE 3-1
Revisions to 1980 General Plan (GP)

Revisions to background text and policies:

- changes in state laws and general plan mandates since 1980;
- new issues that have emerged since 1980 or changes in issues addressed in the 1980 Plan resulting in "gaps" in policies or anachronistic approaches to issues (eg: water supply and drought contingency planning);
- incorporation of significant plans, reports, and related studies since 1980 having a direct bearing on policy directions and implementation of the GP (eg: 1987 Open Space 2020 Task Force report; S.F. Bay Estuary Project, et. al.)

Revisions to GP structure, format, and policies:

- restructuring the GP according to the three areas "Countywide Issues," "Rural Unincorporated Area Issues," and "Urban Unincorporated Area Issues;"
- inclusion of a "User's Guide" to the Plan;
- organizing policies within each chapter by "strategies," which articulate the direction of the Plan with regard to particular issues;
- clarification of policy statements, intent and direction without altering substance.

Implementation revisions, include:

- retention of valid Implementation Recommendations from 1980 GP
- development of new implementing recommendations
- provide annual report on GP and recommend implementation priorities in view of budget available

Source: Santa Clara County Planning Office.

recommendations. At its June 23, 1994, meeting, the Committee unanimously endorsed the revised Draft 1994 General Plan for adoption by the Board of Supervisors.

Phase 3 will consist of the public review process and adoption of hearings for the Draft Plan. Formal review hearings will be scheduled in accordance with state mandates before the Planning Commission and the Board of Supervisors. Completion of the General Plan EIR will also be part of Phase 3.

2. **GPRAC Membership.** The GPRAC consisted of elected officials and members of the

public appointed by the County Board of Supervisors to represent a broad, comprehensive spectrum of community interests affected by the General Plan. Supervisor Dianne McKenna served as the Chair, and Supervisor Michael Honda served as Vice-Chair. Other participants include:

- 2 Members of the County's Board of Supervisors
- 2 Members of the County's Planning Commission
- 3 Elected officials appointed by the Cities Association
- 1 Elected official appointed by the Mayor of San Jose to represent that city
- 23 Members of the general public representing:
 - agriculture
 - air and water quality, and other environmental concerns
 - development and real estate
 - education
 - housing
 - large business and industries
 - small businesses
 - organized labor
 - public safety, law and justice
 - recreation
 - social service needs
 - transportation
 - rural unincorporated area land owners
 - urban unincorporated area residents

For the individual members, see the GPRAC roster in the General Plan.

E. Alternatives to the Project

This EIR reviews the following alternatives to the Draft 1994 General Plan:

1. **"No-Project" Alternative.** This alternative consists of retaining the existing Santa Clara County General Plan, as it would be the policy document in place if the proposed Draft 1994 General Plan were not adopted.
2. **Mitigated Alternative.** This alternative encompasses the mitigations proposed in this EIR.
3. **Alternative Plan Policies Considered by the GPRAC.** This section includes a discussion and rationale for rejecting Alternatives C-E and their environmental impacts.

CHAPTER 4
**COUNTYWIDE AND URBAN UNINCORPORATED
AREA POLICIES**

A. Countywide Land Use Planning

This chapter of the EIR describes the Draft 1994 General Plan policies for the County as a whole, including its urban areas. The urban areas include incorporated as well as unincorporated lands. The General Plan addresses countywide lands because policies for their use affect environmental conditions in the rural unincorporated areas.

In recognition of the three primary areas of policy concern contained in the 1980 General Plan, the Draft 1994 General Plan contains three principal sets of policies: those addressing issues of countywide (CW) significance, those pertaining to the rural unincorporated (RU) areas, and those pertaining to the urban unincorporated areas. Part 2 of the draft Plan contains the body of policies of countywide significance. This chapter of the General Plan EIR briefly describes:

- The purpose/function of the CW chapters and policies;
- The relationship between the CW and corresponding RU chapters;
- The CW strategies and policies having the greatest bearing on RU land use and development, and the environmental impacts thereof; and,
- A brief description of the Urban Unincorporated Area chapters, strategies and policies.

It also discusses the governance relationship among the County, the cities and special districts because their plans and actions collectively and individually affect environmental quality of the County as a whole. Before presenting specific aspects of CW policies, it is useful to understand the history and experience of Santa Clara County regarding countywide planning.

1973 Urban Development/Open Space Plan: In response to haphazard and inefficient growth in the 1950s and 1960s, Santa Clara County and the 15 cities within it adopted in 1973 a growth management policy entitled the Urban Development/Open Space Plan (UD/OS). This plan provided a framework of policies to manage and contain urbanization. The central concept of this plan is that future expansion should take place on a staged, orderly basis only under cities' jurisdictions, and that the County no longer allow urban development in its jurisdiction. This policy is a cornerstone of the County's existing General Plan and Local Agency Formation Commission (LAFCO) decision-making process. The land use designations, policies, and map

CHAPTER 4: *Countywide and Urban Unincorporated Area Policies*

Commission (LAFCO) decision-making process. The land use designations, policies, and map of the 1980 General Plan are based on this concept, and the Draft 1994 General Plan perpetuates this concept.

To implement the UD/OS concept, Urban Service Areas (USAs) were established. Each of the 15 cities in the County allow urban development only within areas that are planned to be annexed and receive urban services. While cities may expand their USAs and new cities and special districts may be formed, they must meet criteria established by LAFCO to foster rational and efficient growth patterns. The policies of the 1980 General Plan and the Draft 1994 General Plan are consistent with and reinforce those of LAFCO regarding urbanization. As a result of consistent implementation efforts, there have been relatively few significant expansions of urbanized areas in the 1980s, compared to the preceding decades. The urban service area policies of the County and cities supersede the 1973 UD/OS Plan; similar and supporting policies have been adopted as part of the County 1980 General Plan.

Proposal For Long Term Urban Growth Boundaries (UGBs). The Draft 1994 General Plan recommends that existing USAs policies and countywide growth management strategies be augmented by the creation of long term UGBs. The cities' current USA boundaries are intended to define areas necessary to accommodate development over a short-term period (approximately five years of projected growth.) Furthermore, cities may apply annually to LAFCO to amend those boundaries. Long term UGB's would create a 20-year planning area, indicating lands necessary to accommodate projected long term growth. The 1980 General Plan contained a proposal to establish boundaries defining the "future limit of urban expansion" of a permanent nature, but those policies were never implemented. The 1994 Plan recommends that long term UGBs be adopted by the cities, County and LAFCO in order to increase stability and predictability of land use at the urban fringe, protect valuable resources and open space lands not planned or suitable for urban development, and ensure cost-effective, efficient provision of urban services. (Whether any or all portions of an adopted UGB would be considered permanent in nature would be left to the discretion of each city and LAFCO).

The proposed Urban Growth Boundaries (UGB) would also be instrumental in achieving the over-all goals of the Draft 1994 General Plan, including:

- *promoting compact urban form and development patterns;*
- *protecting valuable natural resources;*
- *preventing urbanization in hazardous areas; and*
- *enhancing greenbelt opportunities.*

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The Draft 1994 General Plan identifies benefits to local government, landowners and the public of establishing the UGBs. It further recommends criteria that could be used to delineate the boundaries. The criteria take into consideration growth needs, natural resource protection, infrastructure efficiency and other environmental values.

B. Draft 1994 General Plan Countywide Issues & Policies

There are several reasons for having strategies and policies in the County's General Plan to address countywide land use. The County General Plan is the primary planning document in the County responsible for articulating jointly-adopted policies of the cities, LAFCO, and the County regarding the location of urban growth and development. These joint urban development policies are expressed in the Countywide Growth and Development chapter which explains their historical basis. LAFCO's policies and guidelines incorporate most of the policy concepts in the County General Plan, but are not widely disseminated. Nor do they attempt to document the past and present conditions that necessitated the urban development policies governing the location of growth in the County. Finally, the urban development policies are the corollary to and foundation of the policies of the County's Land Use Plan governing rural unincorporated area land use and development.

The 1980 General Plan expressed the need for a shared, unified, vision statement of countywide land use, growth, and development on which all jurisdictions could base planning efforts. It also called for more comprehensive approaches to countywide growth management, including housing, transportation and environmental issues. It also recommended a jointly prepared and adopted countywide plan to implement the unified vision of the County's future. The Draft 1994 General Plan builds upon the policies and concerns of the 1980 General Plan regarding the need for countywide planning. It does this by:

- Creating a "vision statement" for the plan;
- Augmenting and refining the growth management strategies and policies of the plan (e.g., elaboration of the "long-term urban growth boundary" concepts originally contained in the 1980 GP);
- Reasserting the need for improved countywide planning and coordination given the increasingly complex nature of metropolitan area problems that transcend local jurisdictional boundaries; and,
- Promulgating the County's General Plan as a potential basis for future countywide land use and growth management planning of a more comprehensive nature than currently exists.

C. Relationship of CW and RU Chapters of the Draft 1994 General Plan

Part 2 of the Draft 1994 General Plan consists of nine chapters addressing issues of countywide significance. These nine, and the corresponding chapters from the Rural Unincorporated Area Issues & Policies part of the Plan are listed in Table 4-1. Three of the countywide chapters, "Economic Well-Being," "Social Well-Being," and "Governance," are optional elements in that state law does not mandate that general plans address them. These three chapters address issues and contain policies of a countywide or regional nature only. Consequently, there are no corresponding chapters for these to be found within the part of the Plan addressing only the rural unincorporated areas.

The differences between the contents of the CW chapters with corresponding RU chapters varies according to the overall subject matter. The differences between chapters may involve:

- Distinct types of issues, with virtually no overlap;
- Some overlapping issues, but varying emphasis depending on whether the policy issues are primarily of concern in the RU or CW area; or
- A combination of the two.

For example, the focus of the CW Transportation chapter is the metropolitan and regional transportation system, as indicated by the strategies outlined in the chapter. The RU Transportation chapter focuses on rural road and transportation issues, also articulated by the strategies within the chapter. There is virtually no overlap between the CW and RU transportation policies. Conversely, some sections of the CW and RU Area "Health & Safety" chapter, such as "Natural Hazards", address virtually the same issues, but with much greater policy emphasis for the rural unincorporated areas. These RU lands are under the direct regulatory authority of the County and are where the majority of natural hazards within the County are found (faults, landslides, and steep slopes, etc.).

D. Countywide Strategies and Policies that Affect Rural Unincorporated Land Use

Certain countywide policies have a direct relationship to the land uses, densities, and environmental impacts on unincorporated lands outside urban service areas. These policies are summarized in this section of the EIR. (The code "C-GD" refers to the Countywide Growth and Development chapter of the Draft 1994 General Plan.)

Policies C-GD 1 - 6 articulate the jointly-adopted policies of the cities, County and LAFCO regarding the location of urban development and the jurisdictional roles involved in future

CHAPTER 4: Countywide and Urban Unincorporated Area Policies

TABLE 4-1
Countywide and Rural Unincorporated Issues

Countywide Chapters	Rural Unincorporated Area Chapters
Growth & Development: <ul style="list-style-type: none"> ● Compact urban development patterns ● Balanced urban growth ● Countywide planning and coordination 	Growth & Development: <ul style="list-style-type: none"> ● Preservation of rural area resources and rural character ● Use of special area planning to address specific rural area needs
Economic Well-Being	
Social Well-Being	
Housing: <ul style="list-style-type: none"> ● Affordable urban housing supply ● Equality of access to housing ● Special needs housing ● Conservation of existing urban housing stock 	Housing: <ul style="list-style-type: none"> ● Special housing needs unique to the rural areas ● Farm worker housing supply
Transportation: <ul style="list-style-type: none"> ● Urban land use patterns that support alternative travel modes ● Travel demand management, system efficiency, congestion management ● Expansion of system capacity and system integration needs ● Support for new transportation technologies 	Transportation: <ul style="list-style-type: none"> ● Planning for future rural area transportation demand ● Rural area non-motorized circulation needs ● Commute alternatives ● Maintenance and safety of rural roads ● Scenic and natural resource preservation along rural roads ● Future rural area aviation needs
Parks & Recreation: <ul style="list-style-type: none"> ● Regional Parks ● Trails and Pathways ● Scenic Highways 	Parks & Recreation: <ul style="list-style-type: none"> ● Regional Parks ● Trails and Pathways ● Scenic Highways
Resource Conservation: <ul style="list-style-type: none"> ● Water supply resources for sub-regional area ● Water quality/watershed management ● Habitat and biodiversity ● Agriculture ● Mineral resources ● Heritage resources ● Scenic resources ● Solid waste management ● Energy resources 	Resource Conservation: <ul style="list-style-type: none"> ● Water supply, quality and watershed ● Habitat and biodiversity ● Agriculture ● Mineral resources ● Heritage resources ● Scenic resources

(Continued on following page.)

TABLE 4-1 Countywide and Rural Unincorporated Issues	
Countywide Chapters	Rural Unincorporated Area Chapters
Health & Safety: <ul style="list-style-type: none"> ● Air quality ● Hazardous materials ● Emergency preparedness ● Noise ● Natural hazards ● Aviation safety ● Health and safety facilities planning ● Waste water disposal 	Health & Safety: <ul style="list-style-type: none"> ● Air quality ● Noise ● Natural hazards ● Aviation safety ● Waste water disposal
<i>Source: Santa Clara County Planning Office.</i>	

urbanization in the county. These policies are the nucleus of the County's urban growth management strategy and are the policies that most directly relate to rural unincorporated area land use and development. The intent of these policies is briefly summarized below:

- *Urban development may occur only within cities' urban service areas and on lands suitable for urban development [C-GD 2 & 3];*
- *To accommodate future demand for urban development, growth should be accommodated through infill rather than expansion of urban service areas into the hillsides and prime agricultural valley lands [C-GD 1];*
- *Outside cities' urban service areas, on unincorporated land under County jurisdiction, only non-urban uses and densities of development will be allowed [C-GD 2].*

A related growth and development policy noted previously, is the proposal to delineate and adopt "long-term urban growth boundaries" [C-GD 19 - 22] to supplement the "Urban development policies" and established Urban Service Area boundaries. Urban growth boundaries (UGBs) of a more long-term nature could better protect the resources and open space lands of what are presently the rural areas. The UGBs could provide a clear indication of the desired direction, location, or extent of planned urban expansion. UGBs would be mutually agreed upon by the cities and the County, and approved formally by LAFCO.

As urban densities and land uses are not permitted in the rural unincorporated areas (by definition, lands outside the Urban Service Areas of the cities), rural area minimum parcel sizes,

CHAPTER 4: *Countywide and Urban Unincorporated Area Policies*

the range of allowable uses, and subdivision potential are intentionally restrictive. These development controls protect resource values, open space, and the rural character of lands that are under County jurisdiction and not planned or suitable for urbanization. Further discussion of these policies and their relevance to the level of development allowed under the Draft 1994 General Plan may be found in Chapter 5.

E. Urban Unincorporated Area Policies

Part 4 of the Draft 1994 General Plan contains two chapters dealing with unincorporated land within Urban Service Areas. The first chapter, "General Land Use Management," sets forth the County's policies with regard to the residual areas of unincorporated land within the USAs, referred to as "islands" or "pockets." The second chapter addresses land use planning for the Stanford University lands. The "General Land Use Management" chapter establishes three principal "strategies" for land use in urban unincorporated areas. These strategies state that:

- *Such areas eventually should annex to the city in which they are located;*
- *Land use and development permitted within such areas should conform to the general plan policies of the appropriate city; and,*
- *Urban services should be provided as efficiently and equitably as possible.*

The County defers to the cities to establish land uses and general densities for the unincorporated lands within the USAs. As these areas will be eventually annexed, the cities have the responsibility of ensuring the long term compatibility of development with their general plans and existing land uses. The County may administer land use regulations and issue permits for development in the event annexation is precluded, but the County General Plan policies are effectively the same as the general plan policies of each city in which a residual unincorporated island is present.

Stanford University is an entity like no other within the urban unincorporated areas. Part of its territory is governed by the City of Palo Alto and part by the County through binding contractual agreements and a "General Use Permit" issued under the zoning ordinance. The Draft 1994 General Plan describes the complex nature of the land use planning agreements governing Stanford University lands and contains policies intended to provide a general understanding of the arrangements. The planning instrument through which the County exercises its most direct control of land use and development for Stanford University is the General Use Permit, for which an EIR was specifically prepared. Within the constraints of the use permit and contractual arrangements between the City of Palo Alto, the County, and the University, Stanford maintains its own campus Land Use Plan.

CHAPTER 4: *Countywide and Urban Unincorporated Area Policies*

Stanford University occupies over 8,000 acres that spans the jurisdictional boundaries of unincorporated Santa Clara County (approximately 4,000 acres) and the City of Palo Alto (approximately 1,200 acres), with the balance divided among unincorporated San Mateo County and the San Mateo cities of Menlo Park, Portola Valley and Woodside. In 1988, Stanford University applied for a general use permit to permit a total of 2,380,300 square feet of net new space in the following manner:

- Allow continuation of then-existing land uses;
- Development of up to 1,900,000 square feet in ten areas in the central campus, along with utilities, roads and other needed infrastructure;
- Development of an additional 5% (480,000 square feet) of building space in excess of the then-existing building square footage on campus to accommodate routine building replacement, expansion and stand-alone structures.
- Increase the daytime population on campus to 33,905 people.

In addition, the Stanford General Use Permit recognizes four "Special Condition Areas" in which additional use permits would have to be approved by the County prior to any new construction.

The General Use Permit enables Stanford to proceed with projects that are consistent with the terms of the use permit after they have undergone environmental review and Architectural and Site Approval (ASA). Projects that are inconsistent with the General Use Permit have to obtain approval for a separate use permit and undergo environmental review and ASA review.

F. Relationship Among County, Cities, and Special Districts

The UGB policy described above would be a major tool for organizing inter-jurisdictional land use planning. Under the present system of governance, Santa Clara County has authority over land use and development only within unincorporated areas of the County. The County's 15 cities each are responsible for land use and urban development decisions for incorporated lands. In addition, "special districts" (e.g., the Santa Clara Valley Water District, school districts, sewer districts) independently make decisions that affect the provision of water, schools, and other services throughout the county. The County and various cities have made several attempts to coordinate countywide planning over the past few decades. These have consisted of the following:

- **Voluntary Organizations.** Several organizations or functions have been established based on voluntary efforts. Generally, the voluntary organizations were successful in generating discussion about countywide issues, but were limited in their ability to

CHAPTER 4: *Countywide and Urban Unincorporated Area Policies*

implement policies. Voluntary efforts of the County and various cities have included the Planning Policy Committee (1968-1978), the Intergovernmental Council (1976-1991), and the Golden Triangle Task Force (1985-1990). In addition, the County's existing and proposed General Plans, which include countywide policies, represent a voluntary effort, in that it's countywide policies are not binding in upon other jurisdictions, but advisory.

- **State-Mandated Organizations and Functions.** Several organizations or functions have resulted from state legislation, which provides them with authority to carry out plans and policies. State-mandated functions have included the Countywide Solid Waste Management Plan and the Congestion Management Program. The Countywide Transportation Plan is authorized by the state, but not mandated.

On a subregional scale, there have been two multi-jurisdictional land use plans: one for South County and one for Stanford (see above). The South County Joint Policy Plan is discussed below.

- **The South County Joint Area Plan (SCJAP):** This plan was adopted by the cities of Morgan Hill and Gilroy as well as Santa Clara County. It was created to coordinate development and planning in the South County area. It was written to be consistent with the general plan policies of the jurisdictions and was adopted as part of each jurisdiction's general plan. In the event of a discrepancy between the Area Plan and the three general plans, the South County Joint Policy Plan requires that the more restrictive policy applies. The land use policies of the plan address urban growth and development, agriculture, open space and recreation, rural/urban land uses and special areas.

The plan calls for ". . . *urban growth and development to occur in the cities in an orderly and contiguous pattern, managed and scheduled consistent with the provision of public facilities and services. Land uses in rural areas should be limited and public services to rural areas should be appropriately limited.*"¹

The South County Joint Area Plan policies were not affected by the Draft 1994 General Plan.

Only the City of Gilroy has significantly expanded its Urban Service Area boundary since the SCJAP was adopted in 1989. The County's land use designation for the affected areas was replaced with city land use designations.

Governance: The Draft 1994 General Plan Update recognizes the need to coordinate land use decisions among cities, the County and special districts. The plan notes that urban problems such as housing supply and affordability, transportation and congestion management, air quality, community services and economic development cannot be effectively solved if jurisdictions

CHAPTER 4: *Countywide and Urban Unincorporated Area Policies*

continue to make decisions with only their particular needs and interests in mind. Under these circumstances, the Draft 1994 General Plan notes that these individual decisions become a source of adverse cumulative impacts.

To address these problems, the Draft 1994 General Plan recommends that a countywide planning organization be formed with the authority to prepare and implement a countywide plan. The Draft 1994 General Plan also contains policies for improving countywide planning efforts through coordination. It furthermore recognizes existing single-issue regional planning authorities that deal with air quality, congestion management, hazardous waste management, solid waste management, airport land use, water quality and many others. While single-issue authorities can address particular aspects of the cumulative impacts of a major metropolitan area, there is no mechanism or mandate for comprehensive, countywide land use and growth management planning necessary to address the sources of urban area problems.

The countywide governance of the Draft 1994 General Plan recommends that the countywide planning body have the authority to review local general plans for consistency with the countywide plan, and establish a procedure for mediating conflicts between jurisdictions. Cities would continue to have authority over land use decisions within their jurisdiction except when they might be in conflict with the countywide plan.

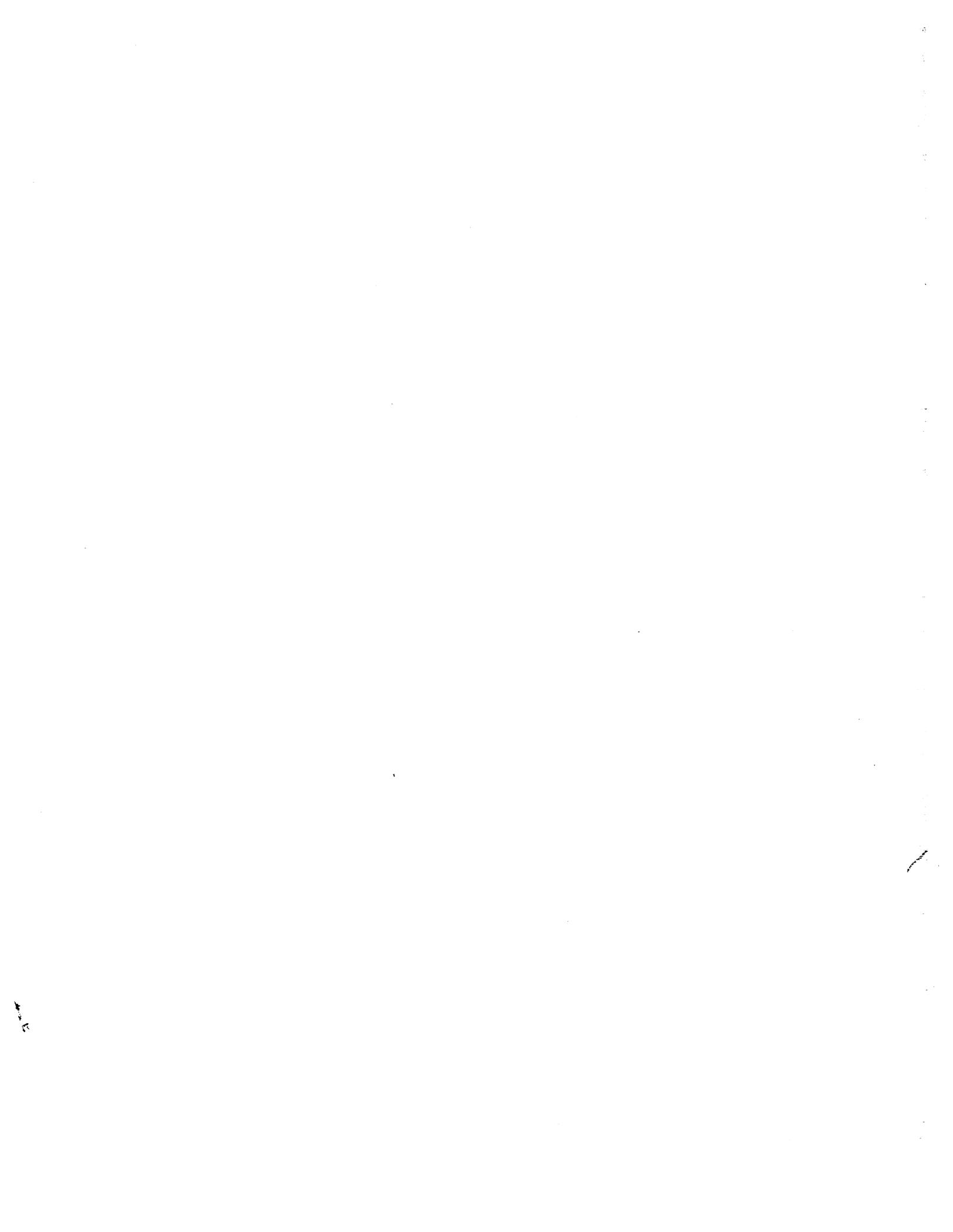
The Governance chapter of the Draft 1994 General Plan recognizes the fiscal disincentives that impede sound planning across jurisdictional borders. Among the implementation measures it recommends is a pool of funds to reward local jurisdictions whose plans are consistent with the countywide plan, as well as regional and state plans. It includes a strategy for fiscal reform to reduce the competition between cities for unbalanced commercial and industrial development, which ultimately impedes growth in housing. These include revenue sharing, a proposition to allow simple-majority votes on tax increases and bond issues, local sales taxes and a restructuring of state and local government functions.

At present, no permanent mechanism exists to encourage cities and the County to consider the plans and policies of adjoining jurisdictions or the sub-region when deliberating local issues that have regional impacts. Nonetheless, the County takes into consideration local general plan land use designations and local zoning ordinances when it establishes land use designation for urban unincorporated areas and USAs. The County's policy is to assign a land use designation that is consistent with that of the city in question. The multi-jurisdictional land use plans are another important step in this direction.

Endnote to Countywide and Urban Unincorporated Area Policies Chapter 4

CHAPTER 4: *Countywide and Urban Unincorporated Area Policies*

1. South County Joint Planning Program, Advisory Committee Recommendations, page 1-2, September 1986.



CHAPTER 5A LAND USE

Environmental Setting

Land Use in the Planning Area

Prior to 1950, Santa Clara County was predominantly rural. Today, the northern Santa Clara Valley is a vast urban metropolis with an economy dominated by high technology industries. With the supply of undeveloped residential land in the northern valley virtually depleted, development in recent years has occurred through a combination of redevelopment and urban expansion. Urban development, accompanied by high land costs and policies intended to alleviate housing and transportation problems has brought increasing densities of development. Consequently, the sprawling suburban character of the northern valley is changing, with multi-story office buildings, hotels, apartments, and condominiums rising visibly across the valley's flat landscape.¹

The southern portion of the valley remains predominantly rural in character. The exceptions are two cities (Gilroy and Morgan Hill), the unincorporated community of San Martin, and scattered areas of rural residential development. In contrast to the densification of north valley, the south valley cities are experiencing growth pressures that involve conversion of farm land and open space to suburban densities. To accommodate this growth, Gilroy has expanded its Urban Service Area since the 1980 County General Plan was adopted. Currently, there is a study of the "agricultural preserve" adjoining Gilroy to determine the extent of pressure for urban development and ways to preserve the remaining agricultural land. Outside these areas, the County has curtailed the development of new urban enclaves.

Santa Clara County's 832,000 acres may be grouped into three main categories:

- **Rural unincorporated areas**, approximately 560,000 acres. The rural areas of the County are lands outside of cities and the urban service area of cities. This is the predominant type of land for which the County has direct control over land use decisions. There are approximately 363,000 acres or 43% of the County in Williamson Act contracts in rural areas. (See Agricultural Resources Chapter 5B for further discussion.)
- **Cities (urban incorporated areas)**. There are 15 cities in Santa Clara County, including San Jose, the County seat. Urbanized areas of the County are located predominantly in the northern section where the cities of Cupertino, Los Gatos, Mountain View, Palo Alto, Santa Clara, San Jose, Saratoga, Campbell, Los Altos, Los Altos Hills, Milpitas, Monte Sereno, and Sunnyvale can be found. Incorporated cities in South County include

Gilroy and Morgan Hill. Each incorporated city has its own General Plan and land use policies.

- **Urban unincorporated areas.** The urban unincorporated area consists of lands that lie within the Urban Service Areas of a city. This includes lands on the periphery of cities as well as "county islands"² (i.e., unincorporated areas surrounded by a city). The County generally defers to the cities in establishing land use and zoning policies for these areas. Islands of unincorporated territory are scattered throughout many of Santa Clara County's 15 cities.
- **Urban Service Areas (USAs).** There are 272,000 acres within urban service areas (USAs), representing one-third of the county. This includes the unincorporated areas and the incorporated lands of the cities themselves. USAs are planned for annexation and urban services within a five-year period. Their boundaries may be reviewed annually by LAFCO, which approves or denies expansion boundaries according to criteria aimed at fostering rational growth patterns. The USA policies have been in effect since the mid-Seventies. Some cities, such as Gilroy, have significantly expanded their USA boundary, while others in north County are essentially land-locked in that they abut the other cities. These USA's have been filled out and will not expand any further.

Regional Growth

To provide context for the analysis of rural area growth expected during the life of the plan, this EIR describes countywide growth patterns. Santa Clara County encompasses 1,300 square miles and is located at the southern end of San Francisco Bay. The population in 1990 was 1.5 million, making it the most populous of the nine Bay Area Counties with about one-fourth of its population. The County is a major employer for the region, providing more than a quarter of all Bay Area jobs.

Growth in the county's population is expected to continue, but at slower rates than the past. By 2010, the life of the Draft 1994 General Plan, the population of the County should reach an estimated 1.8+ million persons, nearly 340,000 more than in 1990. Annual growth rates for the County as a whole will range from 12,000 to 22,000 persons per year. These rates contrast sharply with those experienced in the 1950s and 1960s when population grew by 40,000 to 60,000 per year. More moderate rates of housing and job growth account for the slower population growth rate.

Between 1950 and 1970, the predominant source of population growth was in-migration ranging from 11,000 persons in 1950 to a peak of 46,000 in 1960, which was 79% of the growth in that year. The percentage of population growth attributable to in-migration has steadily declined since the early Seventies, and now the County is experiencing a net out-migration. Most of the County's population growth that is expected to occur will be in San Jose, and to a lesser extent

in South County. North and West Valley are expected to experience relatively little population growth.

Another aspect of change includes increasing household size, from 2.76 in 1980 to 2.81 in 1990; this measure is expected to increase to 2.84 by 2005. Also increasing are the amounts of non-white youth and the senior population.

Growth Projections for the Rural Unincorporated Area

The rural County consists of three major areas: the Santa Cruz Mountains, South Valley and the Diablo Range. These are further subdivided into eight smaller areas: the Santa Cruz Mountains, North Valley, South Valley, the Milpitas Foothills, the San Jose Foothills, the Diablo Range (Morgan Hill) and Diablo Range (Gilroy). These areas are shown in Figure 5A-1 and are used to identify the location of growth in the following section of this chapter of the EIR.

Based on County records, residential development in the unincorporated portions of the County remained fairly steady through the 1980s, peaking in the late 1980s and dropping off during the first few years of the 1990s. This trend is illustrated in Table 5A-1, which shows subdivision activity outside the Urban Service Areas during the period from 1980 to 1993, and in Table 5A-2, which lists the number of single-family residential building permits authorized in subareas of the entire unincorporated County during this same period. A total of 2,241 permits were authorized for single family-homes. Agricultural, Hillside, and Rural Residential areas saw the greatest amount of land subdivision during the 1980s and early 1990s. New single-family residential construction was highest in the North Valley (536 units, 24%), Central Santa Cruz Mountains (326 units, 14%), San Jose Foothills (256 units, 11%), and South Valley/Morgan Hill (276 units, 12%).

The impact analysis in this EIR is based on the growth and development that is expected to occur in the rural unincorporated areas over the 15 year planning period of the Draft 1994 General Plan. To estimate the amount, type and location of future growth, actual development for the 1980-1993 period was researched and projected into the future. These projections may overestimate the actual amount of future development because the real estate market has markedly cooled in California, compared to the 1980s. However, the past location of growth is likely to be a very good indicator of where future growth will occur because General Plan land use designations and policies that channel growth to urban areas will not change. Further, development policies for the rural unincorporated area will not change in large part.

Residential Development

Table 5A-1 presents the net new parcels created in the rural unincorporated area by residential subdivision approvals by the County between 1980 and 1993, the latest year for which this data is available. A total of 245 net new parcels were created; the years of greatest increase were

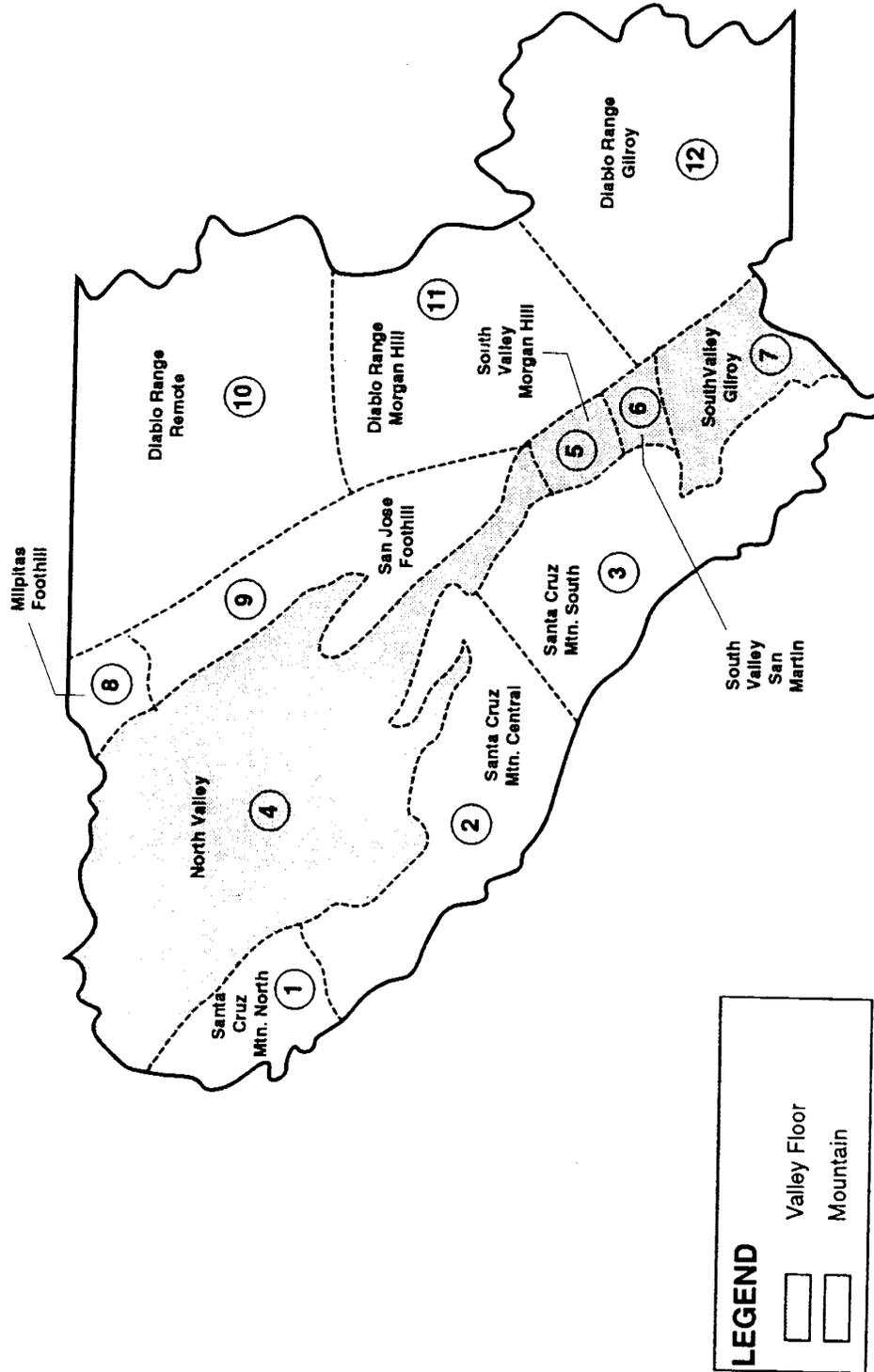
1989 (52 lots) and 1988 (40 lots). The location of this activity was 15% (38 net new lots) in Ranchlands, almost evenly split between area A and B (see Table 5A-1); 17% (41 new lots) in

TABLE 5A-1
Net New Parcels Created by Subdivision Activity, Outside the Urban Service Areas
1980-1993
 (By Existing General Plan Designation)

YEAR	Ranchlands			Agriculture	Hillsides	Rural Residential	TOTAL
	Area A	Area B	Subtotal				
1980	0	0	0	17	11	0	28
1981	0	3	3	2	2	1	8
1982	0	0	0	1	3	0	4
1983	0	0	0	0	4	0	4
1984	3	0	3	4	7	4	18
1985	0	0	0	2	5	4	11
1986	0	0	0	1	3	1	5
1987	0	0	0	4	1	5	10
1988	0	0	0	1	5	34	40
1989	5	5	10	1	4	37	52
1990	5	3	8	4	11	10	33
1991	5	3	8	1	2	11	22
1992	0	6	6	3	0	1	10
1993	0	0	0	0	0	0	0
TOTAL	18	20	38	41	58	108	245
PERCENT	7%	8%	15%	17%	24%	44%	100%

Table note: Percent totals may not add up due to rounding.

Figure 5A-1 Subareas of County



Sources: Santa Clara County Advance Planning Office

Planning Analysis & Development

Table 5A-2
Single-Family Residential Building Permits Authorized, throughout the Unincorporated County, 1980-1993

YEAR	Santa Cruz Mountains North	Santa Cruz Mountains Central	Santa Cruz Mountains South	North Valley	South Valley (Morgan Hill)	South Valley (San Martin)	South Valley (Gilroy)	Milpitas Foothills	San Jose Foothills	Diablo Range (remote)	Diablo Range (Morgan Hill)	Diablo Range (Gilroy)	Total
1980	12	59	26	110	32	16	25	1	29	10	5	8	333
1981	7	45	15	164	15	11	11	2	14	4	2	1	291
1982	1	17	5	25	4	5	3	1	7	0	2	2	72
1983	5	14	7	34	17	12	1	0	6	0	2	4	102
1984	2	8	9	7	8	7	3	0	7	0	0	1	52
1985	1	26	20	27	19	12	10	1	14	2	3	18	153
1986	4	20	17	30	18	18	12	1	19	1	6	32	178
1987	5	28	27	23	17	24	12	3	25	1	5	29	199
1988	3	31	21	15	49	24	19	3	33	0	4	22	224
1989	71	20	15	15	11	20	23	0	27	2	0	19	223
1990	8	14	9	50	27	14	11	2	35	0	1	6	177
1991	9	16	4	13	22	2	10	0	25	0	0	3	104
1992	10	15	1	18	26	2	5	0	8	0	0	1	86
1993	0	13	2	5	11	3	2	0	7	2	0	2	47
Total	138	326	178	536	276	170	147	14	256	22	30	148	2,241

Table note: Includes USAs and non-USAs; the proportion of permits inside USA boundaries and governed by city General Plans is not know.
Source: Santa Clara County Planning Office.

Agriculture areas; 24% (59 new lots) in Hillside areas; and 44% (108 new lots) in Rural Residential areas.

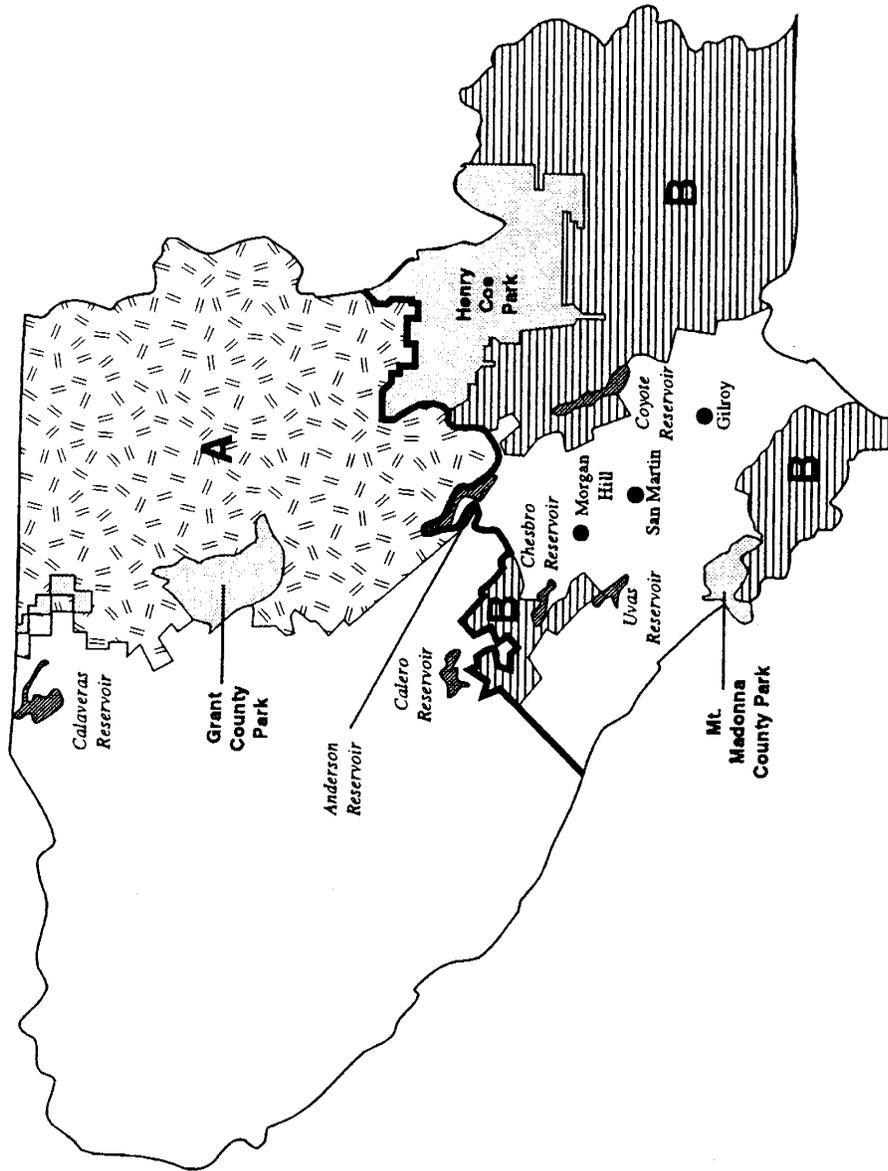
The number of net new parcels created through subdivision does not, by definition, include the original lot for which the subdivision was requested. If both the original and newly created lots are counted, there were 374 lots available for development between 1980-1993. It is assumed that an application for subdivision is an indicator of intent to ultimately develop all parcels, so this EIR uses the total number of parcels in a subdivision as the basis of growth projections. Of the 374 subdivided lots, 110 were created through minor subdivisions, defined as less than 4 parcels. Table 5A-3 shows the total number of parcels created by subdivision application approval between 1980 and 1993.

Table 5A-4, presents the amount of land subdivided between 1980-1993. Over 30,800 acres were involved, representing about 5% of the rural unincorporated area of the county.³

Subdivisions are a good indicator of residential development attributable to the county's land use policies because the number of parcels created is directly related to policies defining the allowable density of development in rural unincorporated areas, and because the County has approval authority over subdivision applications. The number of single-family residential permits authorized provides indication of growth overall, but this measure includes development occurring on lots of record⁴ which have the right to develop with at least one dwelling unit, regardless of any General Plan Policies and approval of the county. Consequently, subdivision approvals are used as the basis of land use projections for the Draft 1994 General Plan because it more accurately reflects growth attributable to the Plan that will occur under the discretionary authority of Santa Clara County. As discussed later in this EIR, the potential for expansion of existing Rural Residential areas would be curtailed under the Draft 1994 General Plan, so use of past figures may slightly inflate future subdivision numbers.

Development on existing legal lots of record will impact natural and urban systems and should be considered in cumulative impact assessment. Therefore, Table 5A-2 presents information on all single-family residences authorized between 1980 and 1993 to estimate future activity of this type. There were 2,241 single-family residence building permits authorized overall. This may include some development on lots created through subdivision in the 1980-1993 period, but it is not possible to determine how many. The years of highest activity for single-family residences were 1980 (333 units), 1981 (291 units), and 1988 (224 units). The locations in which the greatest residential growth occurred was North Valley (536 units), Santa Cruz Mountains Central (326 units), Morgan Hill (276 units) and the San Jose Foothills (256). Although it is not possible to determine at this time how many of these were proposals in their cities' USAs, most of the permits authorized within the North Valley subarea are presumed to be within urban service areas and therefore governed by city General Plans.

Figure 5A-2 Areas Designated Ranchlands in Unincorporated Santa Clara County



LEGEND

-  Ranchlands Area "A"
-  Ranchlands Area "B"
-  Dividing Line
-  Major County Parks and Other Public Open Lands
-  Reservoirs



NO SCALE

Sources: Santa Clara County Planning Office

(See Ranchlands Development policies for explanation of regulations pertaining to Areas A & B)

TABLE 5A-3
Parcels Created by Subdivision Applications Outside the Urban Service Areas
1980-1993 General Plan

Designation of Lands Subdivided

YEAR	Ranchlands			Agriculture	Hillsides	Rural Residential	TOTAL
	Area A	Area B	Subtotal				
1980	0	0	0	24	13	0	37
1981	0	4	4	4	4	2	14
1982	0	0	0	2	4	0	6
1983	0	0	0	0	7	0	7
1984	4	0	4	6	12	7	29
1985	0	0	0	4	7	7	18
1986	0	0	0	2	6	2	10
1987	0	0	0	9	2	10	21
1988	0	0	0	2	8	43	53
1989	7	8	15	2	8	53	78
1990	8	5	13	7	18	17	55
1991	7	5	12	2	4	13	31
1992	0	8	8	5	0	2	15
1993	0	0	0	0	0	0	0
TOTAL	26	30	56	69	93	156	374

Source: Santa Clara County Planning Office

TABLE 5A-4
Total Acreage for Subdivision Applications
(within the Rural Unincorporated Area) 1980-1993

	Acerage
Ranchlands	16,274
Agruculture	8,220
Hillsides	4,986
Rural Residentail	1,347
Total	30,827

Source: Santa Clara County Planning Office

**TABLE SA-5
New Non-Residential Development Approved by Type and Year, 1980-1993
(Unincorporated Areas of Santa Clara County)**

TYPE	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	TOTAL
Agriculture related & support	1	2	0	1	4	2	2	3	2	0	2	2	4	5	30
Education/academic	2	2	2	4	6	8	6	10	4	3	23	3	4	0	56
Commercial	6	0	5	3	3	3	3	4	8	6	3	1	2	1	48
Industrial	3	2	0	4	3	1	3	2	1	2	1	0	1	1	24
Recreation	1	0	1	2	2	0	1	5	0	6	0	3	1	4	26
Office	2	1	2	5	0	1	1	1	1	0	0	0	0	1	15
Institutional	6	2	0	1	1	3	1	2	1	1	1	0	5	1	25
Utility/Communications	2	2	4	2	3	3	4	2	2	0	3	3	0	4	33
Public	0	1	0	2	0	1	0	0	0	0	0	0	1	0	5
Resource	0	1	0	1	0	1	0	0	1	1	0	0	0	0	5
TOTAL	23	13	14	25	22	23	21	29	20	19	12	11	18	17	267

Source: Santa Clara County, Office of Planning

**TABLE 5A-6
New Non-Residential Development by Type and Region, 1980-1993
(Unincorporated Areas of Santa Clara County)**

TYPE	SC Mtns North	SC Mtns Central	SC Mtns South	North Valley	South Valley MH	South Valley SM	South Valley Gilroy	Diablo Foothills Milpitas	Diablo Remote SJ	Diablo Foothills	Diablo Foothills MH	Diablo Foothills Gilroy	Total
Agriculture related & support	2	0	0	4	4	6	10	0	1	0	0	3	30
Education/academic	0	0	0	55	1	0	0	0	0	0	0	0	56
Commercial	0	1	2	34	0	7	0	1	0	0	0	3	48
Industrial	0	0	0	16	0	6	2	0	0	0	0	0	24
Recreation	2	3	6	3	3	6	3	0	0	0	0	0	26
Office	0	0	0	14	1	0	0	0	0	0	0	0	15
Institutional	0	0	1	15	0	1	4	0	4	0	0	0	25
Utility/Communications	2	8	7	7	0	4	0	0	1	3	0	1	33
Public	0	0	0	1	1	1	2	0	0	0	0	0	5
Resource	0	0	1	0	0	0	0	0	0	0	0	0	5
TOTAL	6	12	17	149	10	31	21	1	6	3	0	11	267

Table notes:
MH = Morgan Hill
SM = San Martin
SJ = San Jose

Source: Santa Clara County Planning Office

Non-Residential Development

Table 5A-5 shows non-residential development in both the rural and urban unincorporated areas of the County between 1980 and 1993. A total of 267 projects were approved, of which 139 were located within city USAs. The main types of projects approved were educational academic (56), commercial (48), utility/communications (33), and agriculture related (30).

Table 5A-6 shows the locations in which non-residential projects were approved; the majority (149) were approved in the North Valley area (most of which are in USAs). Of these, 56 were associated with Stanford, 34 were commercial, 16 were industrial, 15 were institutional and 14 were office. Most agriculturally related projects were in the South County area.

Table 5A-7 shows where the development has occurred with respect to General Plan land use designation. Approximately half the 267 projects (i.e., 139) were proposed in Urban Service Areas; although these areas are unincorporated, they are not areas in which the County designates land uses or exercises independent land use control. Therefore, this proportion of the past development is excluded from the future growth projections of the Draft 1994 General Plan. Only 128 projects are located in the rural unincorporated area; these are addressed in this EIR. The 139 are included in the cumulative impact analysis.

Projections (1995-2010)

The land use projections used in this EIR have three components:

1. Residential subdivisions in the rural unincorporated area under the land use control of the county. These are part of the primary impact generating uses of the Draft 1994 General Plan.
2. Non-Residential permit approvals in the rural unincorporated area under the land use control of the county. These also are part of the primary impact generating uses likely to be permitted under the Draft 1994 General Plan. Other non-residential development is part of the cumulative impact analysis.
3. Single-family residential building permits on legal lots of record over which the County does not have discretionary approval authority. This type of development is used to estimate cumulative impacts in the unincorporated area. It may overstate potential growth levels to the extent that it includes development on subdivided lots that are already counted in item 1 above.

TABLE 5A-7
New Non-Residential Development by Type & Designation, 1980-1993
(Unincorporated Areas of Santa Clara County)

TYPE	USA	AR	HS	A	RR	RS	OSR	OUTSIDE USA	TOTAL
Agriculture related & support	1	3	2	17	6	1	0	29	30
Education/academic	56	0	0	0	0	0	0	0	56
Commercial	32	0	3	1	10	2	0	16	48
Industrial	13	0	0	4	7	0	0	11	24
Recreation	2	1	9	7	6	1	0	24	26
Office	14	0	0	1	0	0	0	1	15
Institutional	15	0	3	5	2	0	0	10	25
Utility/Communications	5	3	20	1	4	0	0	28	33
Public	1	0	0	3	1	0	0	4	5
Resource	0	5	0	0	0	0	0	5	5
TOTAL	139	12	37	39	36	4	0	128	267

Source: Santa Clara County Planning Office

TABLE 5A-8
Growth Projections, 1995 - 2010

New Residential Subdivision Units	Total Approved 1980-1993	Annual Average	15-year Projections
Non-Residential Subdivision Units	374	26.7	400
Non-Residential Projects	128	9.1	137
Cumulative single-Family	2,241	160.0	2,401

Table notes:

The annual rate of growth attributable to the Draft 1994 General Plan

Source: Santa Clara County Planning Office

TABLE 5A-9 Land Use by Acreage and Location (Unincorporated Area)	
LAND USE CATEGORY	TOTAL ACREAGE
Resource Conservation	
<i>Agriculture, Large Scale</i>	16,700
<i>Agriculture, Medium Scale</i>	9,700
<i>Hillsides</i>	107,500
<i>Ranchlands</i>	330,300
<i>Other Public Open Lands</i>	37,600
<i>Existing Regional Parks</i>	46,600
<i>Open Space Reserve</i>	3,500
Subtotal:	551,900
Rural Residential	9,600
Specialaa Land Use Policy Areas	1,000
Other Land Uses	1,000
Inside Urban Service Areas	5,500
Subtotal:	17,100
Grand Total:	569,000
<i>Source: Santa Clara County Planning Office</i>	

To estimate growth under the Draft 1994 General Plan, the overall growth rates from the 1980-1993 period were annualized by dividing the total by the number of years for which data is available. This annual growth rate is then multiplied by the 15 years in the planning horizon of the 1994 General Plan. Table 5A-8 shows the growth projected for the next 15 years. Cumulative single-family figures include development in the USA's as well as UI area.

Relationship Between the Existing and Proposed General Plan

Land Use Goals. Most of the goals and policies of the 1980 General Plan will be carried forward into the 1994 General Plan. Therefore, it is useful to provide an overview of key provisions of the 1980 plan. The existing Santa Clara County General Plan requires that urban growth may only

occur in cities, seeks to conserve natural resources and restrict development in hazardous areas. The Plan recommends that most of the county's future urban development be accommodated within the existing urban areas, rather than by expansion. The 1980 Plan further recommends that urban development not be extended into hillsides, the Coyote Valley, or the majority of the South Valley. The Plan seeks to improve the County's jobs-housing balance by locating jobs and housing closer together, by increasing the supply of affordable housing, and by tying employment growth to housing construction and the availability of public services. The Plan recommends closer coordination among the County, cities, and special districts regarding decisions and activities that affect the County's overall physical development. These broad goals are carried forward to the Draft 1994 General Plan, with some refinements and revisions.

Land Use Categories and Designations. The Land Use Map of the County General Plan includes four major land use categories: 1) Resource Conservation, 2) Rural Residential, 3) Areas with Special Land Use Policies, and 4) Other Land Uses. The Land Use Map designates most of the County's rural unincorporated lands as Resource Conservation. Table 5A-9 shows the number of acres within each of the major land use categories and the distribution of future growth by geographic location. For rural areas, the Plan recommends that lands unsuited for urban development not be annexed to cities or included in urban service areas. The Plan designates Resource Conservation Areas (RCA) as lands outside urban service areas that are not clearly established in Rural Residential uses or other specialized uses. RCA designations include:

- Baylands;
- Hillsides;
- Agriculture;
- Regional Parks and other public open Lands
- Open Space Reserves (OSR); and
- Ranchlands.

The Plan advocates density transfer among other means, as a mechanism to preserve prime agricultural lands, and establishes limitations on lots that may be created in Ranchlands. In Hillside areas, the Plan encourages clustering and requires open space dedication as part of new clustered development. In Rural Residential areas, the Plan establishes housing, agriculture, and open space as the primary land uses, and requires that no new or significantly expanded Rural Residential areas be created.

There are no major changes in the land use designations and land use map under the Draft 1994 General Plan. Most of rural unincorporated area is designated Ranchlands (330,300 acres) followed by Hillsides (107,500 acres), Regional Parks (46,600) and Other Public Open Lands (37,600 acres). Rural Residential land encompasses 9,600 acres, mostly in South Valley (7,500 acres). Approximately 5,500 acres are inside Urban Service Areas and are lands suitable for annexation. The County does not establish General Plan land use designations for these areas, but rather defers to the cities' general plans.

General Plan Amendments. Table 5A-10 presents privately initiated General Plan amendments (GPAs) that were approved by the County between 1980 and 1991. This data provides an indication of changes that occurred after Plan adoption. The table shows that there were 29 GPAs. Nine GPAs were from Rural Residential Hillside, Open Space Reserve and Agriculture to Site-Specific Policies. Seven were from Hillside, Open Space and Agriculture to Rural Residential. In terms of land area, the largest GPA was a 465 acre change from Hillside to Rural Residential. In all, 1,515 acres were converted out of the 560,000 acres of rural unincorporated land, affecting less than 1% of the lands under the County's jurisdiction.

Special Areas: The 1980 General Plan and the Draft 1994 General Plan recognize certain planning areas that require special attention and policies. These areas are listed below followed by a discussion of them and their status under the draft plan.

- New Almaden Historic District
- Los Gatos Watershed
- Los Gatos Hillside Land Use Policies
- San Martin
- Monterey Highway
- Major Educational and Institutional Uses and Stanford University
- South County

New Almaden: This planning area is a nationally registered historic district to be preserved under the provisions of the County's Historic Conservation District. The 1980 General Plan and the Draft 1994 Plan both contain one policy recognizing the status of this area. There will be no changes under the Draft 1994 General Plan.

Los Gatos Watershed and Hillside Land Use Policies: The Los Gatos Watershed includes all of the lands in Santa Clara County which drain into the Lexington Reservoir below Lake Elsmán. This watershed is designated "Resource Conservation - Hillside." The 1980 General Plan notes the existence of many severe environmental constraints on these lands and requires strict adherence to County standards for development. Special policies restrict commercial development and logging and precludes industrial development in order to protect the watershed's resources. They call for design standards and guidelines for commercial development. These policies will not change in the Draft 1994 General Plan.

The Los Gatos Hillside Land Use Policies note the existence of the Los Gatos Hillside Plan, a specific plan jointly adopted with the town of Los Gatos which is not itself a part of the General Plan. Development under the specific plan is deemed compatible with the County General Plan provided that densities in the 20 - 160 acre range conform to the slope density formula for this area. There will be no changes to any of these policies under the Draft 1994 General Plan.

TABLE 5A-10
Privately-Initiated General Plan Amendments
(Approved 1980-1991)

Designation Changed TO	Designation Changed FROM	Amendments	No. of Acres	% of Total Acres	Notes
RURAL RESIDENTIAL	Hillsides	4	95		a
	Hillsides/Ag. Med. Scale	2	315		
	Open Space Reserve	1	11		
	Subtotal:	7	420	28%	
RURAL RESIDENTIAL (20-acre min. parcel size)	Hillsides	1	465		b
	Subtotal:	1	465	31%	
ROADSIDE SERVICES	Ag.-Med. Scale/Hillsides	1	167		c
	Ag.-Large Scale	2	14		
	Ranchlands	1	26		
	Rural Residential/Ag.-Med. Scale	1	14		
Subtotal:	5	220	15%		
AGRICULTURE - MEDIUM SCALE	Ag.-Large Scale	1	26		
Subtotal:		1	26	2%	
SITE-SPECIFIC POLICIES	Rural Residential Hillsides	4	220		
	Open Space Reserve	2	87		
	Ag.-Large Scale	1	13		
	Ag.-Med. Scale	1	10		
		1	9		
Subtotal:	9	340	22%		
UNIVERSITY LANDS - CAMPUS	University Lands - Study Area	1	23		
Subtotal:		1	23	1%	
OTHER MISCELLANEOUS		5	21		
Subtotal:		5	21	1%	
TOTALS:		29	1,515	100%	

TABLE NOTES:

a: Includes 182 acres of permanently preserved open space.
b: 20-acre minimum parcel size established through parcel-specific amendment.
c: Nob Hill Foods/Tree Haven Family Park - commercial recreation area, subsequently part of Gilroy USA.

Source: Santa Clara County Planning Office

Major Educational and Institutional Uses and Stanford University: The 1980 General Plan contains policies for these types of facilities, addressing university campuses, academic reserves and open space. The development policies focus on environmental concerns and conservation of natural, visual and heritage resources for Stanford University. The 1980 General Plan notes that the university is responsible for its own infrastructure. In addition to these policies, there is a General Use Permit for Stanford, and contractual and legal agreements regarding development and services on the campus. The latter are not a part of the County General Plan, but represent achievement of a joint planning process for Stanford lands. There would be no change to the Major Educational and Institutional Uses policies in the Draft 1994 General Plan. However, a new chapter would consolidate information related to Stanford.

San Martin: Land use policies for San Martin are addressed in the 1980 General Plan; the South County Joint Land Use Plan also contains additional policies for this area. The San Martin planning area stretches from Maple Avenue on the north to Masten Avenue on the south and East Foothills to West Foothills. The 1980 General Plan policies recognize the unique character of San Martin as rural community surrounded by agricultural and open space uses. It notes several serious environmental constraints that should be taken into consideration during review of development projects, including septic tank and soils permeability limitations, water quality, drainage and flooding, public services and utilities. It contains policies to restrict and guide commercial, industrial and residential development and encourages continued agriculture and supporting uses. A portion of Highway 101, the South Valley Freeway, is recommended to be evaluated as a scenic highway. The Draft 1994 General Plan would change three policies for San Martin to clarify density, minimum parcel size and the slope density formulas.

Monterey Highway: This is a use permit area which consists of properties with access to and frontage on Monterey Road from Metcalf Road south to the County line. It excludes the Urban Service Areas of San Jose, Morgan Hill, Gilroy and the San Martin commercial/industrial use permit area. 1980 General Plan policies for this area recognize and legalize formerly nonconforming uses in areas designated Agriculture and Rural Residential. These uses consist of commercial facilities that serve the community. The 1980 General Plan prohibits further strip development along Monterey Highway and places restrictions on auto storage and sales uses, requiring a use permit and Architectural and Site Approval. Legally established uses are allowed to expand contingent on obtaining a use permit and Architectural Site Approval (ASA). These policies will not change in the Draft 1994 General Plan. However, the Draft 1994 General Plan includes classifications where non-conforming uses may qualify as legal and therefore expand.

East Foothills: This set of policies is proposed for deletion one year after adoption of the Draft 1994 General Plan, as described in the land use impact section.

Draft 1994 General Plan Strategies

The Draft 1994 General Plan Countywide Growth and Development chapter contains strategies that articulate the vision for the future of the County and guide for formation of specific goals and policies. The broadest strategies are:

Strategy 1: Promoting compact urban form and development.

Strategy 2: Achieving more balanced urban growth and development.

Strategy 3: Improving coordinated, countywide planning.

The Rural Unincorporated Growth and Development Chapter contains strategies to:

Strategy 1: Preserve the resources and rural character of lands outside Urban Service Areas (USAs).

Strategy 2: Develop special area plans for areas that require or would benefit from more detailed planning.

These strategies and specific policies support and are consistent with the philosophy and vision of the 1980 General Plan.

Major Policy Changes: The great majority of the Draft 1994 General Plan carries forward policies of the 1980 General Plan. The changes introduced by the Draft 1994 General Plan for the most part clarify and reorganize provisions of the earlier plan. However, there are a few substantive changes. The major changes are discussed below.

New and Revised Policies. The following new policies are proposed:

- a. In Rural Residential areas, several important new policies were recommended by the GPRAC. They are described below with new or revised text underlined.

Policy 4: This is a new policy that states: *Residential development may be clustered, provided that the open space portions of the development are protected as permanent open space.*

Policy 5: This includes new text which states: *The minimum parcel size within a Rural Residential cluster subdivision shall be no less than 1 acre (density to be determined by 5-20 acre variable slope density formula.*

Policy 6: This policy is revised as indicated by the underlined text: The creation of new Rural Residential areas and the outward expansion of existing areas so designated shall not be allowed.

Policy 7: This policy further discusses redesignation of land to Rural Residential under the following conditions: Parcels may be considered for redesignation to Rural Residential only if for the purposes of infilling existing areas designated in the 1980 General Plan and:

- a. *They have minimal long term viability for agricultural uses;*
- b. *They are suitable for development on septic systems;*
- c. *They are reasonably free from natural hazards, construction hazards, and valuable environmental resources (e.g., hillside, riparian areas, wetlands)*

- b. Transportation Policy 3 is added; it states: New County facilities will be subject to the same landscaping and aesthetic requirements as private-sector projects.
- c. Solid Waste Disposal: This land use designation is proposed to be changed by limiting it to solid waste disposal facilities only (i.e., land fills). It deletes reference to soil waste transfer or processing stations, resource recovery facilities and composting facilities.

A new policy 3 is substituted for old policy LU89. The new policy states that ... the site shall be reclaimed for subsequent open space uses, including but not limited to such uses as parks or other waste management-related uses. The former policy required that sites no longer needed for waste disposal be returned to the general land use designation of the surrounding area.

Polices and Regulations

A. Plan Policies that Foster Environmental Protection

This section of the EIR discusses existing land use policies, ordinances and regulations in the County that serve to protect the rural unincorporated environment. It begins with policies of the 1980 General Plan that are carried forward to the Draft 1994 General Plan, particularly those that describe the intent and provisions of a land use designation with respect to environmental protection. This section continues with a discussion of substantive policy revisions in the Draft 1994 General Plan that are intended to strengthen environmental protection. It is followed by a discussion of other ordinances and regulations implemented by the County or other levels of government to guide growth in an environmentally sound manner. This body of controls provides comprehensive tools to maintain and improve environmental quality in the rural unincorporated area, and equips the reader to understand the impact analysis which follows.

In the interest of brevity, this EIR does not publish verbatim all policies that are discussed. The interested reader should refer to the General Plan itself for this information, using the codes that are given below. For example, LU 12 refers to policy number 12 that can be found in the Land Use Plan Chapter of the Draft 1994 General Plan. When policies of the 1980 Plan are discussed, their new number in the Draft 1994 General Plan is used, not the one they had in the 1980 General Plan.

Policies from the 1980 General Plan

The Land Use policies provide guidance for Resource Conservation areas (RC), Rural Residential areas (RR), Other Land Uses and Special Areas, which are the major land categories used in the General Plan.

Resource Conservation (RC)

Within RC areas, Baylands are protected by LU policy 5, 6 and 7, which address wetland preservation and uses consistent with Bayland resources values.

Also within RC areas are lands designated for Agriculture. Land Use policies LU 8 and 9 articulate the need to protect farmland and policies LU 11 - 15 articulate allowable uses and densities. The permitted uses must be agriculture or related. Parcel sizes are 40 acre minimum in the Agriculture-Large Scale area and 20 acre minimum in the Agriculture Medium-Scale area. These areas are located in South County, much of it south and east of Gilroy, although there are sections north and south of Morgan Hill as well.

Key Hillside (H) policies are LU 17 which articulates the resource value of these areas; LU 18 which identifies the permitted uses (agriculture; grazing; mineral extraction; parks; land in a natural state; wildlife refuges; very low density residential; and certain types of commercial, industrial and institutional uses); and LU 19 which limits density to 20-160 acres minimum parcel size, depending on the slope density formula. Clustering is allowed in the Hillside areas under carefully defined conditions (LU 20). Construction is required to avoid areas of natural hazard, avoid adverse impacts on natural and heritage resources, and mitigate potentially significant adverse impacts (LU 21). Environmental impact assessment supported by technical studies are required for development in steep slopes (LU 24) and non-residential development is required to minimize potentially adverse impacts (LU 25).

Ranchland (R) policy LU 35 states that development within this designation shall protect and enhance continued ranching. The allowable uses are articulated in LU 38 (agriculture, low intensity recreation, mineral extraction, land in a natural state, hunting, wildlife refuges, very low density residential, and other uses that support ranching). There is a limit on the number of parcels that can be created (20 - 75 per year, depending on location). Land use decisions are required to prevent an influx of people to this area (LU 39,41,42).

Open Space Reserves (OSR) are designated for lands that are contiguous to a city but for which a permanent designation has not been established pending further study. Two areas are addressed: lands around Gilroy and lands around San Jose. For San Jose, studies are required to define and resolve land use concerns for South Almaden Valley and certain hillside areas. Similar studies are also called for in the greatly reduced Open Space Reserve adjoining Gilroy.

The Resource Conservation category also includes policies for Existing Regional Parks and Other Public Open Lands. Policies for the former are covered in the Parks and Recreation Chapter of the General Plan and Public Services Chapter of the EIR. The General Plan policies for other public lands note that with the exception of Mid-Peninsula Open Space District lands, these facilities are not generally open to the public.

Rural Residential (RR)

Important new policies were created for the Rural Residential area, and are discussed in the next section. Key policies that are carried forward from the 1980 General Plan are (1) the allowable uses including residential, agriculture, open space, and others to the extent that they serve the needs of the residents and reduce travel demand (LU 56); and (2) density of five to twenty acres per parcel size (LU 57). New parcels may be redesignated to RR only for the purposes of in-filling and if able to meet specific criteria in LU 61. The criteria require that the parcel be substantially surrounded on three sides by existing RR land; that the parcel have minimum long term viability for agriculture; be suitable for septic systems; and be reasonably free of hazards and valuable environmental resources.

Urban Development Policies

Policy C-GD1

Most of the future urban growth of Santa Clara County should be accommodated within the existing urban areas, through infill development, rather than through expansion of the urbanized area into hillsides and resource areas.

Policy C-GD2

Urban development shall occur only within cities' urban service areas (USAs) and under city jurisdiction. The County shall not allow urban development on unincorporated lands outside cities' USAs.

Policy C-GD3

USAs should generally include only those areas suited for urban development. Development of such areas should be:

- a) reasonably serviceable with public facilities and services;
- b) relatively free from risks associated with natural hazards;
- c) without substantial adverse environmental impact;
- d) not likely to create severe off-site impacts on surrounding areas; and
- e) without cumulative adverse impacts on the County's water supply, watersheds or any other natural resource.

Policy C-GD7

Urban expansion should be planned on a staged, orderly basis, consistent with applicable plans (i.e., city, County, countywide plans) and the availability of needed urban services and facilities.

Other Land Uses

This set of land use policies apply to major educational and, institutional uses; public, utility, transportation, industrial, solid waste and industrial facilities. Major educational and institutional uses primarily apply to Stanford and have been discussed previously in this EIR. Other policies address the compatibility of these uses with their surroundings (LU 73, LU 74, LU 78, LU 79, LU 81, LU 83, LU 87) and the requirement for public review (LU 76). Roadside Services are required to be limited to prevent strip development and associated environmental problems such as visual impacts, traffic hazards, land use incompatibilities and demand for urban services in rural areas (LU 81). Industrial uses outside the USA may only be expanded if they meet the criteria of LU 93, which includes showing the need to be in a rural area, provision of transit or shuttle bus service to the site, showing the availability of housing within a reasonable commuting distance for employees, and showing the ability for the industry to provide its own services. Industrial uses are also required to have a plan for the rehabilitation of any physical damage done to the site through industrial use.

Special Area Policies

These are discussed in the Project Description, Chapter 3 of this EIR.

Minimum Parcel Sizes and Density

Among the 164 policies from the 1980 Plan that remain virtually unchanged, the most notable from an environmental impact perspective is continuation of the minimum parcel sizes and densities (table below). Re-adoption of these policies means that land use will not intensify under the Draft 1994 General Plan.

Urban Development Policies

The "urban development policies" from the 1980 General Plan are retained in the Countywide Growth and Development chapter of the Draft 1994 General Plan, policies GD 1-6. They call for permitting development only in areas that are already urbanized, within city USAs, have suitable urban services and will not degrade the quality of the environment. These policies serve to preclude urban sprawl, premature development, "leapfrog" development patterns, loss of farmland, and inefficient public services. In so doing, they help reduce commuting, maintain air quality and noise levels and preserve valuable habitats.

Rural Unincorporated Area

Growth and Development policies for the Rural Unincorporated Area (RU-GD 1 through RU-GD 5) articulate the County's approaches to managing lands, preserving resources and maintaining rural character. RU-GD 3 in particular requires land uses and development in the County to be consistent with other policies for resource conservation, avoidance of natural hazards, pollution prevention, preservation of agriculture, and minimizing the costs of public services.

**TABLE 5A-11
Land Use Designations and Allowable Densities**

Designation	Allowable Density	Zoning District
Bayands	None specified	Combining zones: Wetlands (-bw and drylands -bd) (A-20 or A1-20 base district)
Agriculture-Medium Scale	20 acres per dwelling unit	A-20
Agriculture-Large Scale	40 acres per dwelling unit	A-40
Hillsides	160 acres/dwelling unit, unclustered; 20-160 acres/dwelling unit, if clustered, depending on average slope; (clustered parcels 2 acre minimum or greater)	HS
Ranchlands	20-160 acres/dwelling unit if slope density utilized; otherwise 160 acre/dwelling unit (20 acre absolute minimum)	AR
Open Space Reserve	20 acre/dwelling unit	A-20, but no commercial, industrial or institutional uses allowed
Rural Residential	5-20 acres/dwelling unit, depending on average slope (clustering possible with open space dedication)	RR

Source: Santa Clara County Planning Office.

Substantive Policy Changes in the Draft 1994 General Plan

There are a number of substantive policy changes and additions to the Draft 1994 General Plan that distinguish it from the 1980 plan. These are discussed below, and are evaluated in the impact section of the EIR.

1. Urban Growth Boundaries: The Draft 1994 General Plan proposes a policy (C-GD 19) to strengthen growth management by establishing long term growth boundaries. The purpose of the boundaries would be to:

- a) provide a clear indication of the desired direction, location and extent of long-term urban expansion;
 - b) provide adequate protection for natural resource and hazard areas from urbanization; and,
 - c) ensure provision of efficient urban services.
2. Golf Courses: The Draft 1994 General Plan proposes policies (LU 12-13) that will place constraints on golf courses in agricultural areas. LU 12 states that no permits or applications will be accepted for golf courses within the "agricultural preserve" where the land is designated Agriculture - Large Scale (AL) south and east of Gilroy. Policy LU 13 calls for a study to establish policies for golf course development in other agricultural areas (i.e., those outside the agriculture preserve).
3. Hillside: The Draft 1994 Plan proposes Hillside policies for allowable non-residential densities (LU 25-27) and dedication of open space by non-residential development projects (LU 28-29). Non-residential uses are required by LU 25 to avoid adverse environmental impacts; demonstrate no increased risks associated with natural hazards; provide safe and adequate access without impacting local transportation routes; create no adverse visual impacts as seen from the valley floor and adjacent public recreational areas; and cause no significant increase in the demand for public services or infrastructure.

Policy LU 26 provides standards for recreation, commercial and other uses involving overnight accommodations. These facilities are required to have densities compatible with the scale of allowed recreational and commercial uses; have an appearance harmonious with the natural setting and be sited in a compact area to avoid environmental impacts and reduce the need for improvements.

Policy LU 27 identifies specific measures of land use intensity for which uses in the Hillside area will be evaluated. These include trip and wastewater generation rates; extent of grading, vegetation removal, drainage modifications and other alterations of the natural environment; and noise and nuisance potential.

Policy LU 28 encourages dedication of open space easements for all uses other than single-family housing and agriculture in Hillside areas when needed to protect public health, safety and welfare; in order to prevent adverse impacts; and/or to create buffers for neighboring properties. Policy LU 29 specifies the nature and duration of the easement. (Similar policies already exist for open space designation for residential development).

4. RV Parks: The Draft Plan proposes an interim policy addressing RV parks in Hillside Areas (LU 31-33) and Roadside Services areas (LU 84-86) that would be in effect until a study of RV parks has been completed. The policies require that RV parks be reviewed with the understanding that they may be used to provide long-term high-density housing; that the allowable densities be guided by those for rural public camp grounds and recreational vehicle parks; and that RV parks conform to the adopted policies, ordinances and design standards.
5. Rural Residential: The Draft Plan proposed revisions to the Rural Residential policies (LU 58-59) to encourage clustering and dedication of open space. These policies permit clustering provided the resulting open space is dedicated permanently. This can be accomplished with dedication of an open space easement to the county. The minimum size of an individual lot can be no less than one acre. The density is determined by the 5-20 acre variable slope density formula, and can be no greater than underlying density of a conventional RR subdivision.

Policy LU 60 revises an existing policy to clarify and restrict the expansion of Rural Residential areas. The conversion of Ranch, Agricultural and Hillside lands to Rural Residential is not allowed unless it meets the criteria of LU 61 described in the previous section. These policies preclude inefficient use of land and the premature loss of agricultural land. It reduces the demand for new public services and infrastructure in hard-to-serve areas. It also averts the creation of residential areas that would be difficult to turn into well-planned neighborhoods at some time in the future.

6. The East Foothills policies are proposed to be phased out over one year which would have the effect of precluding new development at higher densities than elsewhere in lands designated "Hillsides" or "Rural Residential."

B. Ordinances and Regulations that Reduce Impacts

Zoning Ordinance

The Zoning Ordinance regulates land uses under the County's jurisdiction. It specifies density as well as types of uses that are allowed in each of the zoning districts in the County. The Zoning Ordinance also specifies the use permit procedure for the establishment of uses that are listed as allowable with a use permit. Use permits may be granted by the Planning Commission subject to a list of required findings. Some of these findings can be used to mitigate potential environmental impacts. In addition, specific uses require additional findings that may further protect the environment.

General Use Permit Findings

The planning commission grants use permits on the basis of evidence submitted at a hearing. The findings must include, without limitation, that:

- (1) Safe access (including access for fire and emergency vehicles), adequate off-street parking and loading and unloading areas (if applicable) shall be provided;
- (2) Waste and sanitation facilities shall satisfy applicable county, state and federal requirements;
- (3) The use shall not adversely affect water quality;
- (4) The use shall not be detrimental to the adjacent area because of excessive noise, odor, dust or bright lights;
- (5) The use shall not cause traffic congestion adversely affecting the surrounding area;
- (6) Erosion on the site shall be controlled; and
- (7) Adequate storm drainage exists or shall be provided.

The proposed use will not cause a substantial adverse impact upon the environment, or will provide public benefits which outweigh the impact.

Land Development Regulations

These regulations include the Subdivision and Single Building Site Ordinances (described below), Grading and Geologic Ordinances (both described in Geology environmental setting), Official Plan Lines (described in Transportation environmental setting) and Underground Utility Districts (no relevance to mitigation).

- a. Subdivision Ordinance (Section C12-1: C12-299)
Regulates the subdivision of land in accordance with the Subdivision Map Act. Subdivisions must be reviewed in accordance with all applicable County regulations including the Zoning Ordinance and the General Plan. The tentative map will be reviewed for sewage disposal, domestic water system, noise, fire safety, drainage, street patterns, erosion control, grading, geology, underground utilities, street lighting, parking, tree planting and preservation and lot design. (Sec.C12-53)
- b. Single Building Site Ordinance (Sec. C12-300:C12-399)
Regulates development of single building sites that have not been regulated under any land division ordinance or not subject to a Use Permit or Architectural and Site Approval. Site development plans will be reviewed for zoning, building setbacks, on-site drainage, proposed sewage system, water supply, proposed grading, required street encroachment permits and the location in relation to official geologic maps. (Sec.C12-310)

C. Significance Criteria

CEQA *Supplementary Document G(a)* defines a significant effect as *conflict with adopted environmental plans and goals of a community where it [a project] is located*. For purposes of the EIR, that broad statement is supplemented with the following criteria to determine whether the Draft 1994 General Plan would cause significant land use impacts.

- Cause a substantial change in land use patterns which are inappropriate, inefficient or incompatibilities with existing land uses.
- Create conflicts with the use and enjoyment of existing land uses, including nuisances.
- Inflict damage on important environmental resources.
- Induce growth, including the conversion of farmland.

Impacts and Mitigations

Impact 1. Growth Under the Plan. The Draft 1994 General Plan would accommodate growth at approximately the same level as during the last 14 years (i.e., 1980 - 1993). The planned growth includes 400 new parcels created as a result of subdivision and 137 non-residential development projects. Most of the growth, however, would be unplanned as it is not within the County's authority to deny development on vacant lots of record that were created years before the existing General Plan. Approximately 2,400 units would occur on such lots scattered throughout the County, some of which would overlap with the 400 subdivided parcels. The residential growth opportunities are adequate to meet the county's housing need in the Rural Residential areas of San Martin, as identified in the Housing Element.

The policies of the Plan would not induce growth because they place substantial emphasis on preserving existing land use patterns and resources in rural areas. The non-urban land use designation that most accommodates growth is Rural Residential; as noted above, the Draft 1994 Plan would make it more difficult to expand these areas. Other policies noted above place severe restrictions on industrial, commercial and institutional uses in the rural unincorporated area. These would tend to preclude the types of development that could establish a nucleus of uses that over time would cause further development outside urban areas. *This Draft 1994 General Plan is not expected to have significant growth impacts.*

Mitigation Measure: No further mitigation is required.

Impact 2. Change in Land Use Patterns. The Draft 1994 General Plan will, for the most part, maintain the land use patterns of the 1980 General Plan because land use designations and the Land Use Map will not change. The future land uses on the ground are expected to be similar to existing land uses for most of the county, especially if the UGB policy is adopted. The UGB policy would define clear, long term growth boundaries to protect the rural unincorporated lands from development. Examples of where the Draft 1994 Plan may not be able to assure consistent land use patterns are discussed below.

A. USA Expansions. The cities and LAFCO have the option of expanding the USAs within the 15 year life of the Draft 1994 General Plan. It is possible that cities could designate or approve land uses that are different from present patterns under the County's jurisdiction. This could lead to a loss of agricultural land and/or premature urbanization of the fringe of the rural unincorporated area. *This would be a significant impact.*

Mitigation Measure 1: The cities and County should establish 20 year growth limits as recommended in the UGB Policy of the draft plan.

Mitigation Measure 2: LAFCO should deny expansion of commercial development into viable agricultural land, and emphasize in-fill sites to meet these needs. *This would reduce the impacts of commercial development to a level of insignificance.*

Mitigation Measure 3: Implement the recommendations of the Agricultural Preserve Study discussed in Chapter 5B. *Implementation of these mitigations would reduce the impact to a level of insignificance.* [Responsibility: cities, County and LAFCO].

Rural Unincorporated Areas

B. East Foothills Area: The Draft 1994 General Plan proposes to eliminate the East Foothills polices after a one-year phase out period. This action would bring about greater land use consistency as the East Foothills policy was used to increase the density of new development beyond what it otherwise would be in the Rural Residential or Hillside area. Within the one-year phase out period, some land owners might be induced to apply for subdivision approval in order to get the higher density, although it is not known how many parcels this might effect. *The phasing out of the East Foothills policy is not considered a significant impact.*

Mitigation Measure: No further mitigation is required.

- C. **Rural Residential areas:** Land use policy LU 61 of the Draft 1994 General Plan would make it more difficult to expand the Rural Residential area which is the area in which most residential growth can occur. These policies would ensure that Hillside and agriculture lands with high resource values are protected from further encroachment by low density residential uses such as "ranchettes." The County's Housing Element finds that there are sufficient infill parcels available in the San Martin area to meet the County's housing needs. *Therefore, the loss of residential growth potential in the RR areas would not be a significant impact on housing and would be a beneficial impact on resource conservation.*

Mitigation Measure: No further mitigation is required.

- D. **Clustering Policies:** The Draft 1994 Plan Policies LU 58 and LU 59 would permit clustering in the Rural Residential area, provided the resulting open space is permanently protected by easement dedicated to the county. The minimum lot size for a dwelling would be one acre, reduced from five under the existing plan. However, the overall density of the original parcel would remain unchanged. The ability to cluster makes more efficient use of the land, protects natural resources and view corridors and is more efficient to serve with roads and utilities. Although smaller individual lots are possible, septic loading and topography make this environmentally infeasible for much of the RR area. *Clustering in RR areas is a beneficial impact of the Draft General Plan.*

Mitigation Measure: No further Mitigation is required.

- E. **RV Parks in Hillside areas.** RV parks have been approved in the County to provide a needed service to the motoring public. They are permitted in Hillside and Roadside Service (RS) areas. Proposals to expand RS areas to accommodate RV parks are pending (i.e., Masten, Parkway Lakes and Collishaw). As state law makes it difficult for local government to limit the length of stays in RV parks, and it is difficult for local government to enforce length of stay limitations, these facilities can become long term communities. They create a demand for public services in areas not equipped to provide them. Further, they establish high density housing inconsistent with the intended land use pattern of Hillside and RS areas. If used for permanent housing, RV parks have the potential to dramatically increase the residential growth of the County. For example, 400 additional subdivided parcels are expected over 15 years. One RV park such as Masten would accommodate 300 RVs. *The potential change in land use patterns, density, public service needs and the potential to be growth-inducing in Hillside and RS areas are significant impacts of RV parks.*

Mitigation Measures 1: The County intends to undertake a study of RV park needs, the appropriate densities and conditions of approval that are needed to make them consistent with the overall goals of the plan. The County should give a high priority to this study. *While a study cannot mitigate impacts, it is a necessary first step.* [Responsibility: Santa Clara County]

Mitigation Measure 2: Refrain from approving any new or expanded RV parks until the recommended study is complete.

Mitigation Measure 3: Abide by study findings for appropriate densities such that RV parks can be adequately served and are consistent with the intent of the underlying land use designation of the vicinity.

These mitigations, as a group, would reduce the impact to a level of insignificance. [Responsibility: Santa Clara County]

Impact 3. Land Use Compatibility. Two land use policies raise questions of land use compatibility: golf courses in agricultural areas and RV parks in Hillside areas. The latter is fully discussed above. Golf courses are permitted in the H, RR and A areas. The environmental impacts of these uses include the use of pesticides and herbicides, water and other service demands, conversion of agricultural land and growth-inducement. Golf courses and the ancillary uses that usually accompany them -- restaurants, pro shops and eventually residential development -- are not compatible with Ranchlands and Agriculture. They are fundamentally different types of activities that create nuisances for each other. Golf courses bring traffic to rural areas and involve a more intensive use of the land than farming and ranching, so they materially change rural qualities of the more remote areas. This use increases land values, which in turn create pressure to convert more lands from ranching or agriculture to other uses. The County will not take applications for golf courses in the Agriculture Preserve area. In the other AM and AL areas, approvals would be based on studies of whether the proposed course would be compatible with the agriculture zone and uses. *Golf courses in agriculture zones would have significant impacts.*

Mitigation Measure 1: Deny approval for golf courses in areas designated for agricultural. *This would eliminate the impact.* [Responsibility Santa Clara County]

Mitigation Measure 2: If mitigation #1 is not adopted, the County should condition golf course approval on measures that will prevent adjacent lands from converting to high intensity uses. This might involve open space easements, transfers of development rights or other instruments to constrain growth around the courses. [Responsibility: Santa Clara County]

Mitigation Measure 3: Conduct the study called for in proposed policy LU13 to assess the impacts of golf courses. [Responsibility: Santa Clara County]

These mitigations, as a group, would reduce the impact to a level of insignificance.

Impact 4. Inefficient Land Use Patterns. The Roadside Services (RS) policies are not sufficiently specified to prevent inefficient land use patterns. Presently, a project sponsor must request a Draft 1994 General Plan amendment to convert Hillside, Ranchland or Agriculture lands to RS. The Draft 1994 Plan does not specify where such uses are appropriate, so the County is typically reacting to developer requests. RS uses begin with a limited commercial or industrial use, and would likely be followed with other similar uses over time. Eventually, these would be supplemented with more development, building on the precedent that has been set. This growth could conflict with or compromise the open space character and agriculture and grazing uses in the remote areas. The RS policies, particularly LU 81, describe in detail what the RS uses should avoid. The proscriptive rather than prescriptive nature of RS policies have resulted in inefficient land use patterns, as the RV park impact describes. Inefficient land use patterns are difficult and costly to provide with public services, are often associated with premature development and can be growth-inducing. *This is a potentially significant impact.*

Mitigation Measure 1: The County should provide criteria for RS site designation to identify areas where RS uses are needed and appropriate over the next 15 years, consistent with the existing and expected land uses in the H, RR and R areas of the county. The criteria might include facilities to serve an existing community need, facilities that reduce the need to make long auto trips rather than encouraging them, and determining the "critical mass" needed (i.e., market size) to justify the facility. [Responsibility: Santa Clara County]

Mitigation Measure 2: Each Proposal for RS status should undergo environmental review to determine its appropriateness for the site on which it is proposed, including whether it would be growth-inducing and lead to an inefficient land use pattern with costly service requirements. [Responsibility: Santa Clara County]

These mitigations could, as a group, reduce the impact to a level of insignificance.

Impact 5. Land Use Conflicts. Hillside Strategy 3 permits commercial, industrial or institutional uses in Hillside areas, if by nature they require remote rural settings. The broad nature of this strategy could result in inappropriate uses in rural areas. For example, commercial uses next to farms or ranches could create a wide array of land use conflicts in terms of traffic, noise, odors, use of hazardous materials, etc. Although such facilities could conceivably mitigate adverse impacts, their presence in a remote area sets a precedent for these types of uses. It then becomes difficult if not impossible to deny other such requests, thus undermining the fundamental objectives of the Draft 1994 General Plan to channel such uses to urban areas. *Land use conflicts and inappropriate uses in Hillside areas are a potentially significant impact.*

Mitigation Measure 1: The County should more clearly and narrowly define by ordinance the types of uses that "by their nature require remote rural settings." Measures to discourage inappropriate commercial, industrial and institutional growth in the Hillside areas should be investigated and adopted prior to approving any such projects. *This would reduce the impact to a level of insignificance.* [Responsibility: Santa Clara County]

Impact 6. Conformity with Other Plans and Policies. By eliminating the East Foothills policies, the County land use designations will be consistent with that of San Jose. No other conformity impacts are associated with the Draft 1994 General Plan. *This is a beneficial effect of the Draft General Plan.*

Mitigation Measure: No further mitigation is needed.

Impact 7. Cumulative Impacts. The growth projections in the EIR indicate the cumulative development that would occur under the Plan (see Table 5A-8). The overall thrust of the Plan is to enable modest amounts of growth and protect environmental resources as much as possible, consistent with supporting the agriculture and grazing

economy of the rural unincorporated area. The cumulative impacts of these growth and Plan policies are described under each individual topic in Chapter 5 as well as in Chapter 6D. *Please refer to the individual sections for a discussion of the significance of the impacts.*

Mitigation Measure: Refer to each individual section of Chapter 5.

Endnotes to Land Use Chapter

1. County of Santa Clara Department of Planning and Development, Alternative Futures: Trends & Choices (Report of Santa Clara Strategic Vision Steering Committee), October 1990, page 52.
2. County islands or urban pockets are land areas that are wholly or partially surrounded by city lands but have not formally and legally been incorporated into the city. Technically, they remain under the jurisdiction of the County, but often they demand and sometimes receive urban services.
3. $30,000/560,000$ acres in rural unincorporated areas = 0.05
4. Existing legal lots do not require any subdivision approval on the part of the county.

CHAPTER 5B
AGRICULTURAL RESOURCES AND
MINERAL EXTRACTION

Environmental Setting

A. Agricultural Resources

California's 36,000,000 acres of agricultural land produce important economic and environmental benefits to the people of the state, nation, and the world. Covering one-third of the state, agricultural land supports one of California's major industries and is responsible for the production of an important portion of the nation's food and fiber. A unique combination of geography, climate and soils enables California agriculture to produce many crops that are found nowhere else in the United States.

The State Legislature recognizes the importance of farmland and determined a need for data on the nature, location and extent of farmland, grazing land and urbanized areas throughout the State. In 1982, the legislature approved legislation to create the Farmland Mapping and Monitoring Program (FMMP) which is embodied in Government Code Section 65570.

The FMMP is performed by the Office of Land Conservation, a branch of the California Department of Conservation. It was established to carry on the mapping efforts begun in 1975 by the U.S. Dept. of Agriculture to map and monitor the status of the nation's farmlands. It provides information on the status of agricultural lands statewide every two years, as reported from local sources for each county. The **definitions** of various kinds of farmlands are as follows:

Prime Farmland: Lands with the best combination of physical and chemical features able to sustain long term production of agricultural crops. It must be supported by developed irrigation water supply that is dependable and of adequate quality during the growing season. To be included in this category, the land must have been used for the production of irrigated crops at some time during the last four years.

Farmland of Statewide Importance: Lands similar to Prime Farmland but with minor shortcomings, such as greater slopes or with less ability to store moisture.

Unique Farmland: Lands of importance to the local agricultural economy, as determined by each county's Board of Supervisors and a local advisory committee. In

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Santa Clara County, these lands include small orchards and vineyards primarily in the foothill areas, as well as land cultivated as dry cropland for grains and hay.

Grazing Land: Lands on which the existing vegetation is suited to the grazing of livestock. This category is unique to California in farmland classifications, and was developed with the state's Cattlemen's Association and other interested groups. The minimum mapping unit is 40 acres.

Urban and Built Up Land: Lands occupied by structures with a density of at least 1 unit per 1.5 acres, or 6 structures per 10 acres.

Water Areas: Bodies of water of at least 40 acres.

Other Lands: Lands not belonging to any other category, i.e., parks.

Agricultural Land in Santa Clara County

Santa Clara County has a total land area of about 835,400 acres. Presently, agriculture covers about 457,000 acres of County land, most of which (405,600 acres) are range lands of the Diablo and the southern Santa Cruz Mountains. An inventory of Santa Clara County agricultural land by FMMP category is given in Table 5B-1.

County agricultural land has the potential (and has been used) to produce intensively irrigated crops including pears, apricots, prunes, cherries, strawberries, vegetables, and other specialty crops.

Before its intensive urbanization, the north Santa Clara Valley offered outstanding food production resources. Its mild, sea modified climate, its long growing season, its rich deep alluvial soil, its available water, its nearby markets all combined to make it a high producing agricultural garden spot. Subdivisions, shopping centers and other urban development have filled most the North Valley floor, covering some 200 square miles of prime agricultural lands (Class I and II soil types). Aside from residual pockets of agriculture in the North Valley, the South Valley is the last source of local food producing soils within the County.

Crop Production

Not long ago agriculture was the predominant economic enterprise in Santa Clara County. Now that industrialization has eclipsed agriculture in terms of the overall economy, many residents are less aware of its continued importance, particularly to the economy of the South County area, and the cities of Morgan Hill and Gilroy. Growing, processing, and distributing agricultural products are fundamental elements of this region's economy and employment base.

TABLE 5B-1 Santa Clara County Farmland Inventory, 1990			
Type of Farmland Use	Acreage	Percent of Farmland	Percent of All Land
Important Farmland Categories			
Prime Farmland	35,787	8	4
Farmland of Statewide Importance	5,358	1	< 1
Unique Farmland	1,364	< 1	< 1
Farmland of Local Importance	9,043	2	1
Grazing Land	405,558	89	49
Total Farmland	457,110	100	55
Non-Farmland Categories			
	Acreage	Percent of Non-Farmland	Percent of All Land
Urban and Built Up Land	172,895	46	21
Other Lands	197,319	52	24
Water Area (> 40 ac.)	8,119	1	< 1
Total Non-Farmland	378,333	100	45
County Area Total	835,443		
<i>Source: State Farmland Mapping & Monitoring Program</i>			

The County's agricultural soils and growing climate are some of the best in the world, making it possible to grow a multitude of crops. The total estimated production value of agricultural crops in 1991 was over \$150,000,000. In spite of the urbanization of prime soils, agricultural products grown in Santa Clara County totaled over \$154 million in gross value in 1992. Mushrooms, nursery crops, and cut flowers led all categories in value with over \$22 million each. Fruits, nuts, berries, vegetables and grains are all grown within Santa Clara County. The following chart, Figure 5B-1, shows the gross value of county-wide agriculture since 1960 to 1992, the last year for which data is available.

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The County crop list includes over 30 different food crops, with over 20 different vegetables. The production of vegetables and berries has remained steady in acreage since 1982, with a high of 12,605 acres in 1987 and a low of 10,495 in 1989. The total acreage of vegetable crops in the County for 1992 was 11,315.

Overall, orchard acreage has decreased steadily each year. Cherries have taken over as the predominant orchard crop. Cherry acreage has increased from 785 acres in 1985 to 935 acres in 1992. It is the only orchard crop showing a steady acreage increase.

Since 1982, the number of cattle has remained relatively stable, with a high of 72,000 in 1990 to a low of 53,800 in 1987. The total number of cattle for 1993 was 69,800. Many years of drought have prohibited ranchers from increasing herd size. The total number of chickens in the County has fluctuated dramatically since 1982, with a high of 795,000 in 1983 to a low of 300,000 in 1991. The total for 1993 was 385,000.

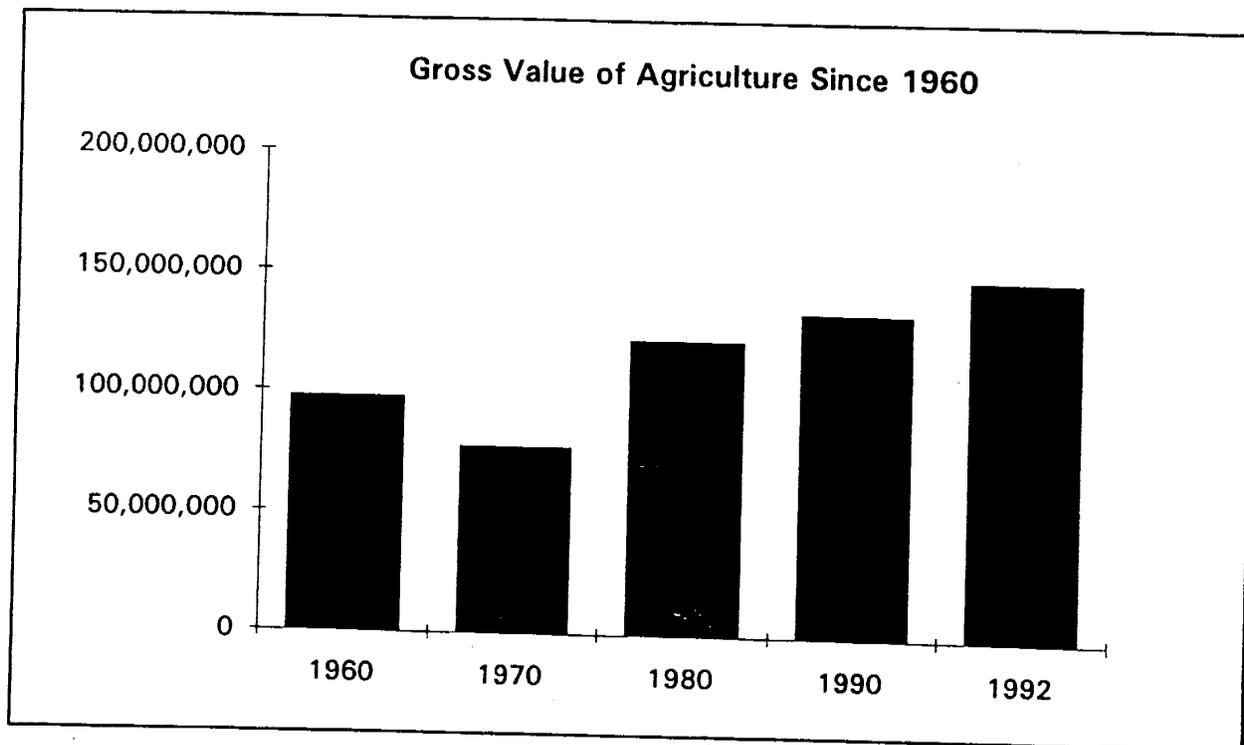
Table 5B-2 shows the acreage, production and value of a number of crop categories as compiled by the County Department of Agriculture in the 1992 Agricultural Crop Report. A breakdown of specific crop types is shown in the Agriculture Appendix.

Agricultural Soils and Prime Farmlands

The United States Department of Agriculture Soil Conservation Service classifies agricultural soils based on a number of factors including cultivation capacity, depth, mineral content and fertility. The agricultural value of the soils is assigned according to two measures: The "Storie Index" and "capability units." The Storie Index ranges from 1 to 100 with six classes of soils within that range. Soils within the ranges of 80 to 100 and 60 to 79 are classified as Class I and II respectively. These are excellent quality soils and have few agricultural limitations. These are considered as "prime" agricultural soils. Soils classified as III and IV are considered good agricultural soils, but have some limitations.

Figure 5B-2 shows the distribution of soil classifications around the County. This map indicates that the majority of Class I and Class II soils are located in the urbanized areas of the Santa Clara Valley. Agricultural potential is irretrievably lost in these urbanized areas. Class III and IV soils are scattered around the periphery of the Santa Clara Valley with some small areas in the Diablo Range and the Santa Cruz Mountains. The remainder of the County is classified as Class V and VI, where agricultural uses are limited to activities such as grazing and timber production.

Figure 5B-1



Source: *Santa Clara County General Plan Update, Agriculture and Agricultural Resources.*

Grazing Lands

Grazing lands generally consist of the non-prime agricultural lands of which there are approximately 405,500 acres, or 89% of the "Important Farmlands" in the County. (see Table 5B-1). Most of this land is designated as Ranchlands in the General Plan. These are generally large parcels although a minimum size of 20 acres would be permitted by the Draft 1994 General Plan. Table 5B-2 indicates that there were 222,000 acres in productive pasture and range land as of 1991 and 1992, or about 50% of the existing grazing land. Livestock contributes to the nearly \$12,000,000 of production value generated by grazing land.

TABLE 5B-2
Agricultural Acreage, Production and Value

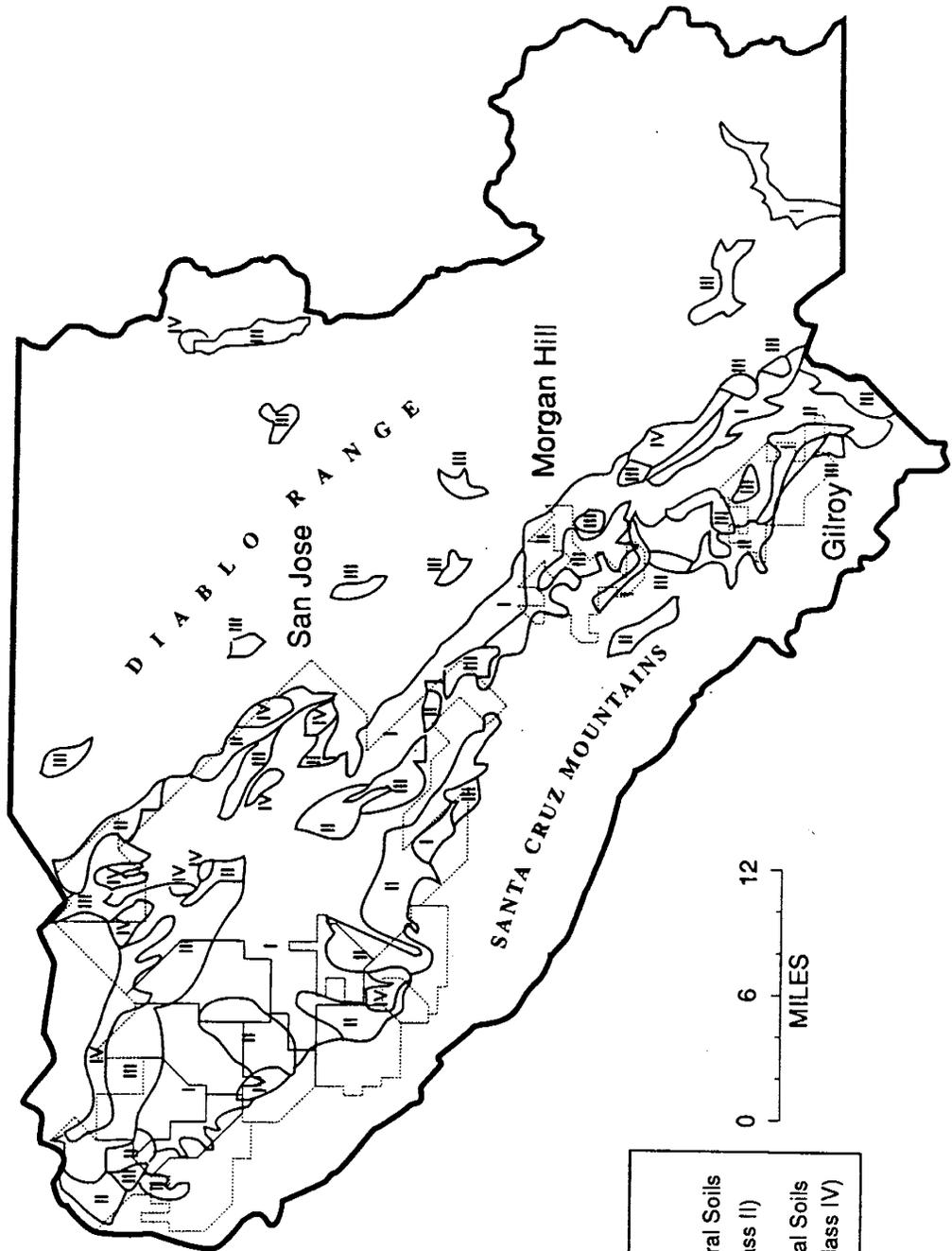
Item	Year	Harvested Acreage ^a	Total Value
Fruits and Nuts	1992	5,000	\$13,585,000
	1991	5,169	\$15,569,000
Seed Crops	1992	1,000	\$2,660,000
	1991	1,1000	\$2,000,000
Vegetable Crops	1992	11,315	\$67,922,000
	1991	11,859	\$64,647,000
Bush Berries and Strawberries	1992	325	\$2,453,000
	1991	231	\$1,933,000
Field Crops (except Pasture & Range)	1992	19,213	\$4,115,900
	1991	19,967	\$8,716,675
Pasture and Range	1992	222,000	\$3,000,000
	1991	222,000	\$3,000,000
Livestock, Poultry and Products	1992	N/A ^b	\$11,904,000
	1991	N/A ^b	\$10,993,000
Nursery & Floral Crops	1992	N/A ^c	\$48,640,400
	1991	N/A ^c	\$47,899,500
Totals	1992		\$154,280,300
	1991		\$151,758,275

Table Notes:

- a. Unit is given in acreage unless otherwise noted.
- b. Unit is combination of number of head and production.
- c. Unit is combination of acreage and greenhouse square footage.

Source: *Santa Clara County Dept. of Agriculture, 1992 Agricultural Crop Report.*

Figure 5B-2 Distribution of Soil Classifications



Sources: Santa Clara County Planning Office

Planning Analysis & Development

Williamson Act

The California Land Conservation Act as amended, also known as the Williamson Act, was enacted by the State Legislature in 1965 as a means of preserving California's prime agricultural lands and other types of open space from urbanization. The Williamson Act sets forth specific minimum parcel sizes to qualify for land conservation contracts. These requirements are 10 acres for prime agricultural land and 40 acres for non-prime land.

Landowners voluntarily choose to enter into a 10-year contract with the County which guarantees the continued use of the land for agricultural or open-space activities. The contract is automatically renewed each year. In return for entering into this contract, the landowner receives property tax relief on the lands under contract. If a landowner wishes to terminate the contract, he or she files a notice of non-renewal with the county. After ten years, the land is free to be used for non-agricultural purposes. Over those ten years, the property taxes on the deed are gradually increased until they have parity with not-contracted land in the vicinity.

The County of Santa Clara has actively used the Williamson Act as an agricultural and open space preservation tool since it was enacted in 1965. As of June 1992, there were approximately 339,770 acres of land under Williamson Act contract in Santa Clara County. This constitutes approximately 41% of the total land area of the County. Since the enactment of the Williamson Act, the County has maintained a firm and consistent policy of opposition to the cancellation of Williamson Act contracts. County approval of requests for contract cancellation has been granted on only few rare occasions involving unusual hardship.

Non-renewal of Williamson Act contracts by property owners can be an indicator of increasing development pressures as owners plan to curtail agriculture and prepare for other uses or sale of property. As indicated in the table below, Table 5B-3, the amount of land in the County that has a notice of Williamson Act contract non-renewal steadily rose since 1987 until a small decrease took place in 1992. The great majority of the Williamson Act non-renewals are located in the South County where the last remaining prime agricultural soils are found. In addition, a surprisingly large number of non-renewals has taken place within the Ranchland area of the southern Diablo Range east of Gilroy.

Figure 5B-3 shows that there have been a number of parcels within the agricultural preserve area east of Gilroy (lands designated "Agriculture-Large Scale"(AL) and "Agriculture-Medium Scale" (Am)) which have filed Williamson Act non-renewal contracts between 1987 and 1993.

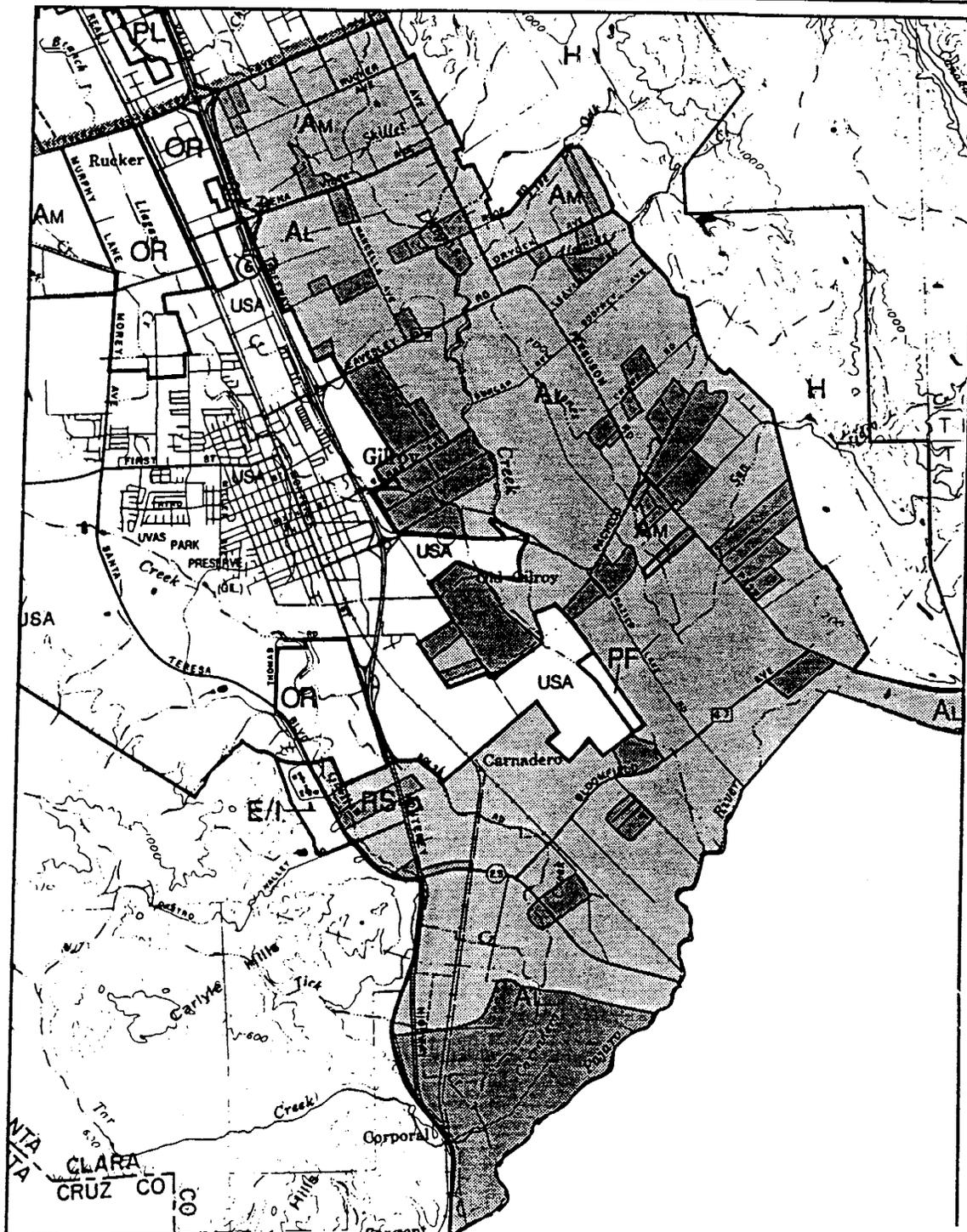
TABLE 5B-3 WILLIAMSON ACT CONTRACTS & CONTRACT NON-RENEWALS		
Year	Total Acres Under Williamson Act Contract	Acres in Process of Williamson Act Non-Renewal
1987-88	357,207	7,856
1988-89	357,133	8,026
1989-90	357,502	8,457
1990-91	348,373	17,631
1991-92	337,242	25,649
1992-93	339,770	24,033
<i>Source: Santa Clara County Draft 1994 General Plan</i>		

County General Plan and Zoning

For over a decade the County has employed rural area policies to maintain farming on large parcels with the greatest long-term potential to remain economically viable. This effort has helped to maintain continued farming and ranching operations by limiting subdividing of the land to sell it off for urban development. The General Plan contains two major land use designations to address maintaining agricultural uses: Agriculture (A) and Ranchlands (R). These are discussed below.

Agriculture land is found primarily along the valley floors. These lands have Class I, II or III soils and have generally been in agricultural production. Allowable uses are agriculture and ancillary uses, uses necessary to support agriculture, and other compatible uses that enhance the long-term viability of agriculture. Allowable densities are 40-acre minimum parcel size in the Agriculture-Large Scale designation, which generally applies to the agricultural preserve of South County. A 20-acre minimum parcel size is permitted in the Agriculture-Medium Scale designation.

**Figure 5B-3 Williamson Act Cancellations
(South County)**



LEGEND

- Parcels in process of non-renewal for Williamson Act during the period 1987-1993
- Ag. preserve study area boundary

 **NORTH**
NO SCALE

Sources: Santa Clara County Planning Office

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Ranchlands are found in much of eastern unincorporated Santa Clara County along the Diablo Range. Like the Hillside areas, Ranchlands are generally unsuitable for urban development because they contain many important natural resources. These lands are so designated to preserve existing large ranches and grazing. In order for them to be viable operations, large parcel sizes are necessary. Therefore, lands with Ranchland designation have limits placed on the amount of new subdivisions that can be approved. Area A, which is north of Coe State Park, has the following limitation:

- No more than 40 lots of less than 160 acres in one calendar year and no more than 75 lots of this size within three consecutive calendar years.
- No more than 20 new lots larger than 160 acres in one calendar year.

In area B, the remainder of the Ranchlands, the following limits apply:

- No more than 20 lots of less than 160 acres in one calendar year and no more than 38 lots of this size within three consecutive calendar years.
- No more than 10 new lots larger than 160 acres in one calendar year.

Agriculture Preserve Study

A joint study is currently being undertaken by the Local Agency Formation Commission (LAFCO), the City of Gilroy, and the County of Santa Clara for those lands generally east of Gilroy which are designated Agriculture Large Scale (AL) and Agricultural Medium Scale (AM) by the County General Plan (i.e. the "agriculture preserve"). The study will determine the impact of development trends since 1980 and of their continuance into the future on the long-term preservation of agriculture in the study area. The study will recommend methods for preservation of the most valuable agricultural lands in the study area.

The study is being undertaken because of Gilroy's desire to expand its urban service area into the agriculture preserve. Two hundred acres of prime agricultural land were added to Gilroy's USA in 1993, and proposals for commercial development are being implemented. Since then, Gilroy has accepted applications for additional projects in the agricultural preserve, and is circulating EIRs for them, indicating an intent to approve commercial projects. LAFCO has agreed not to accept any further applications to extend the USA boundaries around Gilroy until the agricultural study is done. This has the effect of halting development of the pending projects until the agricultural study is complete. The study will include recommendations for programs to preserve agricultural land in the South County area adjoining Gilroy.

The study had not yet been approved for public distribution at the time the EIR was being written. However, a draft report included such agriculture preservation programs as an urban

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growth boundary, amendment of the zoning ordinance to restrict the range of land uses allowed in the agriculture zone classifications, acquisition of conservation easements, agriculture buffers, and incentives for small parcel consolidation and clustering of residential development with the retention of the remaining agriculture land under conservation easements.

Draft 1994 General Plan Strategies

The Draft 1994 General Plan has strategies to preserve agriculture and agricultural lands for both the rural unincorporated areas and the County as a whole. The primary focus of the policies governing Rural Unincorporated Areas is to provide stable land use patterns to limit incompatible uses. (The countywide policies additionally focus on avoiding or limiting the premature conversion of agricultural lands to urbanization). The strategies for Rural Unincorporated Areas are as follows:

Strategy 1: Inventory, map, and monitor the status and type of agricultural lands.

Strategy 2: Maintain stable long-range land use patterns.

Strategy 3: Enhance the long-term economic viability of agriculture.

These strategies are supported by General Plan policies and implementation recommendations which recognize the importance of agriculture to Santa Clara and the value of prime agricultural land. The policies also emphasize the promotion and maintenance of Williamson Act contracts.

Policies and Regulations

Agricultural land is a non-renewable resource. In addition to proposals for future development, agricultural lands and practices are encountering increasing pressure from adjacent and nearby urban development in the form of encroachment and land use incompatibilities. Growth under the Draft 1994 General Plan has the potential to result in agriculture impacts if development is allowed on prime farmland, farmland of statewide importance, unique farmland, and/or farmland of local importance, and if non-renewal of Williamson Act contracts continues. The County has several policies and ordinances which to a great extent protect agricultural lands within its control.

A. Plan Policies that Foster Environmental Protection

Policies from the 1980 General Plan

Existing Urban Service Area (USA) policies discourage unnecessary urban expansion and the inclusion of prime agricultural lands in cities' USAs [C-GD 1-6]. More specifically, these

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policies recommend accommodation of urban growth within the existing urban areas through infill development rather than through expansion into hillsides and resource areas, and development within cities' Urban Service Areas, under city jurisdiction. USAs should generally include only those areas suited for urban development. There would be no change in minimum parcel sizes. Policies R-RC 59-65 encourage the preservation of large agricultural parcels, and limit development to ancillary uses. The intent of these policies are to stabilize long-term land use patterns, allow for long-term investment in agriculture and avoid introduction of incompatible uses such as residential. Land use policies governing allowable uses and density of development in Agriculture areas are essentially unchanged [LU 8-11, 14-15]. These policies recognize the viable agricultural lands under County jurisdiction, the economic benefits to the area, and promote their long-term commitment to agriculture use. Ranchland policies LU 36 and LU 39(e) limit population growth and curtail the number of lots that can be created in any 1-3 year period.

Substantive Policy Changes in the Draft 1994 General Plan

C-RC 42 (c) recommends that LAFCO discourage USA expansion requests when there is more than a five year land supply in the city's USA and encourages retention of adjoining agricultural land in San Benito County. C-RC(i) 16 refers to LAFCO "Agriculture Preserve" study, which is an on-going effort to investigate the viability of agricultural land east and south of the city of Gilroy. The policy calls for evaluating the environmental impacts of city, County and LAFCO policies on the long-term viability of agriculture and mitigating the impacts of any changes in land use over time. R-RC 58 promotes adequate inventory and monitoring of the agricultural land supply as a basis for overall policy decisions. LU 12-13 restrict potential applications for golf courses as an allowable use in agriculture areas.

B. Ordinances and Regulations that Reduce Impacts

Williamson Act Compatible Land Uses

The Board of Supervisors has established a list of uses which are considered compatible with lands subject to Williamson Act contracts. These uses include:

1. Residential uses incidental to the agricultural use of the land;
2. Accessory structures necessary and incidental to the agricultural use of the land;
3. The maintenance of land in its natural state for the purpose of preserving open space for recreation or plant or animal preserves;
4. Recreational uses;
5. Utilities, resource extraction, and waste disposal facilities;
6. Educational, cultural, and religious facilities.

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No other uses would be allowed on lands under Williamson contract even if that use is provided for in the base zoning.

Zoning Ordinance

Article 4 "A" Exclusive Agricultural Zoning District. This zoning district is used to implement the General Plan policies for the "Agriculture" land use designation. The intent of this article is to preserve and encourage agriculture for the vital contributions agricultural production makes to the economy and quality of life within the County. It provides for agricultural uses and uses compatible with agriculture, and permit lands best suited for agriculture and related uses to be used for such purposes.

Agriculture Disclosure and Dispute Resolution Ordinance

In April of 1993, the Board of Supervisors adopted Section A33-138 as part of the County Ordinance Code, to recognize and support the right to farm agricultural lands and permit properly conducted agricultural operations within the County. This "Right to Farm" ordinance requires an agricultural disclosure statement be included in the real estate transfer document. This disclosure statement informs the buyer that property is located in an agricultural area and that they may be subject to certain inconveniences as a result of agricultural operations including noise, odor, dust, etc. The County has determined that inconveniences or discomforts associated with such agricultural operations shall not be considered a nuisance if such operations are consistent with accepted agricultural customs and standards. Where disputes do arise between residents regarding agricultural operations, the County has established a grievance committee to assist in the resolution of such disputes.

California Environmental Quality Act (CEQA)

The County's Initial Study Checklist requires analysis of impacts for: conversion of 10 or more acres of prime agricultural lands to non-agricultural uses or impairment of agricultural productivity of nearby lands, or if the project involves Williamson Act lands.

C. Significance Criteria

According to CEQA *Supplementary Document G (y)*, a project will normally have a significant effect on the environment if it will, "*convert prime agricultural land to non-agricultural use or impair the agricultural productivity of prime agricultural land*". For purposes of this EIR, the following criteria have been developed:

- *Significant:* An agricultural impact would be considered significant if the development or land use changes under the plan causes the loss of any prime

farmland, a substantial cumulative loss of Williamson Act lands, or a substantial reduction of countywide agricultural diversity.

Impacts and Mitigations

Impact 1. Impacts to Agricultural Land Due to Growth Under the Plan

- A. **Subdivisions of Parcels in the Agricultural (A) Area:** The growth projections for the Draft 1994 General Plan indicate that there will be parcel subdivision and some development on the lands designated for Agriculture. Seventeen percent of the net new parcels and 18% of the total number of new parcels that will be created will be in the "A" area. It is assumed that each parcel is being subdivided with the intention of building a residential unit on it. This unit would involve the loss of at least the building site to residential use. Based on the growth projections in Table 5A-8, approximately 72 new parcels will be created in the "A" areas.¹ The minimum parcel size in the Am area is 20 acres and the minimum in the AL area is 40 acres. Using figures in Table 5A-3 and 5A-4, it can be estimated that the average parcel size after subdivision would be 119 acres². Parcels of this size are viable for a variety of agricultural uses including orchards and row crops. Smaller parcels are suitable for the kind of intensive farming that goes on in Santa Clara County (i.e., nurseries, mushroom farms, cut flowers). There is no readily available information on the distribution of parcel sizes that have been subdivided in the agricultural lands in the past nor their use after subdivision. Therefore, it is not known whether the 119-acre parcel size is skewed by a few large parcels or whether the subdivided parcels are being farmed. The distribution of parcel sizes would reveal how many small parcels were created and suggest how much land would lose its viability for various agricultural use. This is consistent with Strategy 1 which calls for monitoring the status of agricultural lands. The County should track the size and use of subdivided parcels in the "A" area to determine whether they are resulting in sizes that are non-viable for agriculture or are being taken out of agricultural use. If this study finds that agriculture is declining in these parcels, the County should seek mechanisms to encourage agricultural use. *While some agricultural land could be lost due to subdivision activity, the minimum parcels sizes and the average parcel size indicate that subdivision of "A" lands would not in itself cause a significant, irretrievable loss of agricultural land nor irrevocably impact the viability of agriculture.*

Mitigation Measure: No further mitigation is required.

- B. **Non-Residential Projects.** The projected number of non-residential projects is 137 for the 15 year life of the 1994 Draft General Plan. Based on the proportion of these projects that have occurred in the "A" area in the past, (as shown in Table 5A-7), 30% or 39 non-residential projects can be expected in the "A" zone.³ About 44% or 17 of

these projects would be for agriculture-related and supporting uses. The balance, some 22 projects, would be a mix of commercial, recreational and other uses. Proposals for non-residential uses in the "A" area are required to obtain a conditional use permit and undergo environmental review. The review process requires disclosure of impacts on agricultural land, loss of prime soils, land use conflict potential, and other factors. Each application is judged on its own merits by the decision-making body. There is no data on the amounts of land involved in these projects. However, it is not expected to be substantial. *The loss of agricultural land attributable to non-residential projects approved by the County on "A" lands is not expected to cause a significant impact.*

Mitigation Measure: No further mitigation is required.

Impact 2. Subdivision of Prime Agricultural Land: There are approximately 35,800 acres of prime farmland in the County, which is 8% of all the farmland in the County. Past subdivision approvals in the Agriculture area involved conversion of 8,220 acres of general agricultural land. This is projected to increase to about 8,800 acres over the 15-year life of the plan.⁴ It is not known how much of this is prime, but assuming it is proportional to all farmland, 8% or 704 acres of this would be on prime farmland. (There is no comparable data available for the potential agricultural acreage affected by single-family residence building permits or non-residential projects.) As discussed in Impact 1 above, the subdivision of a parcel does not in itself preclude continuing agricultural practices or future agricultural viability of the land, as it depends on the use to which the land is put. Nonetheless, CEQA guidelines defines any loss of prime agricultural land as normally a significant impact. The application to subdivide can in some cases be construed as an intent to develop a parcel with some non-agricultural uses. Similarly, single-family building permits and approval of non-residential project applications can be expected to result in non-farming uses of the land. *To the extent that non-agricultural uses occur on prime agricultural land, they could have a potentially significant impact. County policies favor preserving prime agricultural lands. To the extent that they are implemented, they would reduce the impact to an insignificant level.*

Mitigation Measure 1: The County should track future non-agricultural projects to determine the extent to which they are affecting prime agricultural land. (This is consistent with Strategy 1 which calls for monitoring the status of agricultural lands, and policy R-RC 58 which promotes adequate inventory and monitoring of agriculture land supply as a basis for overall policy decisions.) If the loss of prime agricultural land is found to be substantial, the County should require

project sponsors to site buildings away from the prime soils. *This would reduce the impact to a level of insignificance.* [Responsibility: County Planning Department.]

Mitigation Measure 2: The County should evaluate and adopt suitable mechanisms to offset the potential impacts on prime agricultural land including but not limited to impact fees, dedication of conservation easements and purchase of development rights to other prime agricultural lands. *This would reduce the impact to a level of insignificance.* [Responsibility: County Planning Department.]

Impact 3. Loss of Crop Production and Variety. Permitted development upon these lands (i.e., projected growth under the plan including parcel subdivision and uses permitted in the "A" designation) as well as continued conversion of Williamson Act lands might result in a loss of crop production and variety. (See Impacts 9 and 10 below.) As indicated in the Environmental Setting section, growing, processing, and distributing agricultural products remains fundamental to the County's economy and employment base. The County's Article 4 "A" - Exclusive Agricultural Zoning District encourages the preservation of agriculture for the vital contributions agriculture production makes to the economy and quality of life within the county. Because of the County's continuing policies towards preservation of viable agricultural lands, any loss of crop production and variety are anticipated to be small in scale and not greatly affect the County's economic base. *The loss of crop production and variety is not expected to have significant agricultural impacts.*

Mitigation Measure: No further mitigation is required.

Impact 4. Golf Courses. Golf courses are permitted uses in the "A" zone, which implements the General Plan for areas designated Agriculture (i.e., Am and Al); Hillside (H); and Rural Residential (RR) areas. Golf courses in the "A" areas would result in a loss of agricultural land and possibly even prime agricultural land. Golf courses conflict with farming and tend to be growth-inducing as people seek to live in proximity to them. Residences around them in turn generate demand for commercial facilities. Golf courses typically require 100 acres of land and use large amounts of water which would otherwise be available for agriculture. Extensive fertilizers used by golf courses impact water quality by adding nitrates. Three golf courses are pending in the county: Hayes Valley west of San Martin, Los Gatos Country Club in the Santa Cruz Mountains west

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of the Lexington Reservoir and Boulder Ridge in the Santa Teresa Hills. In recognition of golf course impacts, the County will not accept applications for golf courses in the AL zone south and east of Gilroy under any circumstance (see policy LU 12). In other "A" areas, no golf course applications will be approved until a study is completed to establish policies for golf courses in "A" areas (see policy LU 13). *Golf courses can cause significant impacts on the loss of farmland.*

Mitigation Measure 1: Policy LU 13 should specify that the goal of the golf study is to identify the impacts of golf courses on agricultural lands and to mitigate those impacts to a level of insignificance. The study recommendations should be focused on both the specific site for which an application is being proposed and agricultural lands as a whole. Growth-inducing impacts and the precedent that an individual project might set should be investigated as well. *A study in itself cannot reduce the impact to a level of insignificance, but it is a necessary first step.* [Responsibility: County Planning Department]

Mitigation Measure 2: Abide by the recommendations of the study referenced above to reduce golf course impacts to a level of insignificance. [Responsibility: County Planning Department]

Impact 5. Subdivision of Ranchlands. Agriculture and grazing are permitted uses in Ranchlands; some of these lands are suitable for both. Subdivision of these lands in some cases may be an indication of the intent to develop them for non-grazing and non-agricultural purposes. The General Plan (LU 39) recognizes that subdivision is sometimes necessary to help ranchers trade land, raise capital in time of need, help settle estates, and provide for family divisions. As shown in Tables 5A-3 and 5A-4, there were 56 parcels created by subdivision in designated Ranchlands involving 16,275 acres of land. This is 15% of all subdivision parcels and approximately 5% of the designated Ranchlands shown in Table 5A-10.⁵ This figure represents the subdivided Ranchlands over the last 14 years, and is a reasonable indication of the level of subdivision that would occur under the Draft 1994 General Plan. It is not known whether any of these 16,275 acres are suitable for agriculture, but presumably they were largely suitable for grazing. As with lands designated for Agriculture, the land use after subdivision does not necessarily preclude the continued or future use of the land for farming. The

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minimum parcel sizes are 20-160 acres if the slope density formula is used and 160 acres if it is not. Subdivision of land to the smaller end of the range would result in parcels that are untenable for grazing unless combined with other adjacent acreage, although they might be viable for some agricultural uses. The subdivision trends in Ranchlands of the County are expected to continue under the Draft 1994 General Plan, diminishing the Ranchlands available for grazing and possibly agriculture. *However, the potential loss of a part of the 5% of the County's Ranchlands involved in subdivisions would not be a significant impact.*

Mitigation Measure: No further mitigation is required.

Impact 6. Grazing. Grazing is the primary intended use of Ranchlands, which is the designation for 330,300 acres in the rural unincorporated area of the County. It represents 58% of all of the land under the jurisdiction of the County. (See Table 5A-10.) Grazing can cause substantial environmental impacts if it is not properly managed, including erosion (refer to the Biotic Resource section for further discussion of grazing impacts on riparian areas), destruction of riparian zones, reductions in biotic species diversity, and visual impacts. The County does not have any ordinances to regulate grazing impacts nor guidelines for ranch management. However, the Draft 1994 General Plan includes many policies oriented toward resource protection. *Continued grazing which is encouraged by the 1994 Draft General Plan could have a significant impact on the environmental resources that the Draft Plan seeks to protect.*

Mitigation Measure: The County should (a) investigate the extent to which grazing has caused environmental impacts. If they are occurring, (b) it should consider supporting educational measures encouraging good grazing practices similar to what the Plan recommends regarding riparian areas [R-RC (i) 9(b)]. *These measures could reduce the impact to a level of insignificance.* [Responsibility: County Planning Department and Agricultural Commissioner]

Impact 7. Incompatibilities between Urban and Agricultural Uses. A majority of the remaining productive farmland in South County is located near lands currently developed and/or areas of anticipated future development. The proximity of residential uses and productive farmland could potentially lead to nuisance complaints about agricultural practices related to spraying, odors, dust, and noise. In turn, farmers often complain about trespassing, vandalism, damage to crops, urban pets, and other infringements on farming operations. Certain types of

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agricultural uses even aggravate other types agricultural uses, for example odors from dairies and mushroom farms. The sharpest conflicts occur where the urban fringe meets farmlands, particularly at the boundaries of the Rural Residential area. The Draft 1994 General Plan limits the further expansion of the RR area, potentially reducing future land use incompatibilities. Residential uses within the Agriculture and Ranchlands areas experience conflicts as well, but fewer residences are in these areas, and spaces between neighborhoods are often substantial. The Right-to-Farm Ordinance informs property purchasers of the nature of nuisances that occur in farm areas. *Nonetheless, nuisances resulting from land use incompatibilities is a significant impact.*

Mitigation Measure: For new residential developments built in close proximity to agricultural lands, buffers should be required on the residential property to reduce potential conflicts with the agricultural uses. The type (landscaping, open space, walls, etc.) and width of the buffer would be dependent upon the type of agricultural use and practices involved. The feasibility and effectiveness of buffers in different situations should be investigated as part of project review and effective buffers should be required as a condition of approval. *This measure would reduce the impact to a level of insignificance.* [Responsibility: Santa Clara County Planning Department]

Impact 8. Impacts due to Agriculture. The Draft 1994 General Plan, as well as its predecessor, places a great deal of emphasis on maintaining agriculture because it reflects shared values for the desired character of the rural unincorporated area of the County. Most of the impacts in the EIR, consequently, focus on the effects that other land uses would have on agriculture. However, agriculture itself has impacts on other land uses and on the environment. The impacts on other land uses related to nuisances are discussed under Impact 7. The impacts of agriculture on the environment include erosion, high water consumption, groundwater draw down, nitrate loading of groundwater, reduction in species diversity, destruction of archaeological remains, energy consumption, noise, odors and other forms of air pollution. These impacts and recommended mitigations are presented throughout the EIR. Many aspects of agricultural operations are regulated by local, regional, state and even federal agencies; these are also noted throughout the EIR. However, *agriculture has the potential to cause significant impacts on the environment.*

Mitigation Measure 1: These mitigations are discussed more specifically elsewhere in the EIR with regard to the specific impacts involved.

Cumulative Impacts

Impact 9. Development on Legal Lots of Record. It is estimated that there will be development of approximately 2,400 lots of record in the rural unincorporated area under the Draft 1994 General Plan plus 400 subdivision units for a total of 2,800. (see Table 5A-8.) Although this growth is not attributable to the General Plan per se, it could affect agriculture resources in the County, as it is the single largest source of growth. There are no data indicating the land use designations across which this growth has been distributed in the past. However, Table 5A-2 shows that approximately 26% of the single family residence building permits were issued in South County, applying this rate to the cumulative development total of 2,800, 728 units would be expected in South County.⁶ Of these, a significant portion may be in the rural unincorporated area where development may impact agriculture.⁷ *It is not known how much of this growth would affect agricultural land, this remains a potentially significant cumulative impact because development on lots of record account for such a large proportion of growth in the county.*

Mitigation Measure 1: The County should track the location of building permits issued for legal lots of record and determine the extent to which they are causing a loss of agricultural land. If this is found to be substantial over time, the County shall initiate steps to compensate for this loss. (This is consistent with policy R-RC (i) 18 which supports preparation of a cumulative impact analysis of projected losses due to permanent conversion of South County agricultural lands to other uses.) *This would reduce the impact to a level of insignificance.* [Responsibility: County Planning Department, Agriculture Commissioner, LAFCO]

Impact 10. Reduction of Williamson Act Contracted Land. The Draft 1994 General Plan retains the Agricultural and Ranchlands designations currently in place and encourages the retention of lands within Williamson Act contracts (also known as Land Conservation Act contracts). The Draft 1994 General Plan policies that address this issue include C-RC-42 (c), which recommends that LAFCO

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discourage USA expansion requests when there is more than 5 years land supply in the city's USA; C-RC(i) 16, which refers to LAFCO "Agriculture Preserve" study, an ongoing effort to maintain viability of areas east and south of Gilroy; and R-RC 58 which promotes adequate inventory and monitoring of agricultural land supply as a basis for overall policy decisions.

Urban expansion and encroachment into agricultural areas, such as the lands designated Agriculture east and south of Gilroy, often provide the economic incentive for property owners to apply for non-renewal of the Williamson Act contract. When a property owner files a notice of non-renewal, it is assumed that this is done in anticipation of developing the property after the ten year period for which the notice of non-renewal is in effect. Whether the parcel will in fact be able to develop depends on many factors including location, growth patterns and political decisions. For purposes of this EIR, it is assumed that filing a notice of non-renewal is an indicator of intent to discontinue agriculture and grading, and that development will follow for some parcels, particularly those around Gilroy where many notices of non-renewal are on file (see Figure 5B-3). Non-renewal of contracts by the property owner is beyond the direct control of the County and would not be attributable to the Draft 1994 General Plan because it retains policies and land use designations that facilitate continued farming. The General Plan further supports Land Conservation Act lands by channeling urban development to the cities and their USAs.

Non-renewals, which are occurring at the rate of approximately 24,000 acres a year, are expected to continue to contribute to the cumulative loss of farmland, particularly at the urban fringe. This practice undermines the resource conservation policies of the Draft 1994 General Plan. Further, non-renewals would contribute an unknown amount of growth that is not accounted for in the growth projections used in this EIR because it would be speculative to attempt to estimate the amount and timing of development that would be associated with non-renewals. *This continued reduction on the amount of Williamson Act contracted land is considered a potentially significant cumulative impact.*

Mitigation Measure 1: Urban expansion should be avoided in areas near lands currently under William Act contract. If this is not feasible, the loss of agricultural land should be offset by designating a like amount of land of similar quality for agricultural use.

Mitigation Measure 2: USAs should not be extended into viable farmland as this would encourage the filing of notices of non-renewal of these parcels or others close to them.

One mechanism to address this is for cities to adopt Urban Growth Boundaries (UGBs) recommended in the 1994 Draft General Plan. The boundaries should be drawn in a manner that protects quality agricultural parcels "at risk" from advancing urbanization.

Mitigation Measure 3: If Williamson Act land is added to a USA or is annexed, the city in which property is located should require sponsors of large subdivisions and/or commercial and industrial projects to (1) cluster development in non-prime lands and (2) enter and maintain prime soils in a Williamson Act contract as a means of offsetting the loss of agricultural land. This should be done on a 1:1 basis, i.e., for every acre of Williamson Act contracted land that is not renewed, another acre should be entered into contract.

These mitigations would reduce the impact to a level of insignificance. [Responsibility: Incorporated Cities, and LAFCO]

Impact 11. Uses Permitted on Williamson Act Land. The list of land uses permitted on Williamson Act contracted land, as adopted by the Board of Supervisors, permits uses that are inconsistent with policies of the Draft 1994 General Plan that discourage urban uses in rural areas. An example of this is policy R-RC 66 which promotes the retention of Williamson Act contracts for the preservation of agriculture and agricultural lands. On the other hand, recreational, educational, cultural and religious facilities are permitted on Williamson Act lands. These uses can be urban in nature, are often growth-inducing and could be permitted on prime agriculture or other agricultural land, exacerbating the loss of this resource. *Loss of prime agricultural land and large amounts of general agricultural land would be a significant cumulative impact.*

Mitigation Measure 1: Refine the list of permitted uses such that they are limited to activities that need to occupy agricultural land and direct their siting to non-prime lands. *This mitigation would reduce the impact to a level of insignificance.* [Responsibility: Santa Clara County, Board of Supervisors]

Impact 12. Cumulative Impacts of Urbanization on Agriculture. Expansion of the USA by any city, as approved by LAFCO, has the potential to convert substantial amounts of the remaining "A" designated land in the County to urban uses. The areas at risk are between Morgan Hill and San Jose, around San Martin and around Gilroy. Morgan Hill currently has growth control policies in place that limit housing development; it is the least likely to expand within the 15 year life of the plan. San Jose currently has self-imposed constraints in the 101/Coyote corridor, and is not considered an immediate threat to agricultural lands in the area. The Rural Residential areas around San Martin would not be expanded under the Draft 1994 General Plan.

C-GD 1-6 discourages unnecessary urban expansion and the inclusion of prime agricultural lands in cities' USAs; and policy C-RC 42 (c) recommends that LAFCO discourage USA expansion requests when there is more than a five year land supply in the city's USA. Policy R-RC 58 promotes monitoring the agricultural land supply. *Despite these policies, continued urban growth in the County will have a significant cumulative impact on agriculture.*

Mitigation Measure 1: Expansion into the "A" designated lands of the County should not be permitted by LAFCO.

-OR-

Mitigation Measure 2: Implement the recommendations of the Agriculture Preserve Study sponsored by the County, Gilroy and LAFCO.

Either of these mitigations would reduce the impact to a level of insignificance. [Responsibility: LAFCO, County and City of Gilroy]

ENVIRONMENTAL SETTING

B. Mineral Resources

Mineral Resource Inventory

There are a number of mineral resource deposits in Santa Clara County which are of regional or state-wide significance, as determined by the state Mines and Geology Board. They are

identified as Mineral Resource Zones (MRZ). Eight of the sites are currently being quarried (see Table 5B-4).

Mineral resources of significance found and extracted in Santa Clara County include construction aggregate deposits (such as sand, gravel, and crushed stone) and, to a lesser extent, salts derived from evaporation ponds at the edge of San Francisco Bay.

TABLE 5B-4 Quarries in Operation in Santa Clara County, 1992		
Quarry Name (Owner/Operator)	Location	
1. Azevedo (Raisch)	Unincorporated, USA	
2. Curtner (De Silva)	Unincorporated, USA	
3. Lexington (West Coast Aggregates)	Unincorporated, Rural	
4. Permanente (Kaiser Cement)	Unincorporated, Rural	
5. Polak (Granite Rock)	Unincorporated, Rural	
6. Serpa (Raisch)	Unincorporated, USA	
7. Stevens Creek	Unincorporated, Rural	
8. Swenson	Unincorporated, USA	

Table Notes: USA = Urban Service Area

Source: Santa Clara County Planning Office

Construction aggregates have many purposes, including road and building construction. For a growing, highly urbanized area such as Santa Clara County, ensuring adequate supplies of such materials from local sources is of fundamental importance to the economy of the County and region.

Valuable limestone deposits currently mined for cement are found in the Kaiser Permanente quarries along the Monte Bello Ridge west of Cupertino. Rock suitable for road base construction is found throughout the mountain areas of the county. There are some deposits of medium-to-good quality diabase rock, including a sizable deposit on county-owned property on Metcalf Road. High quality sand deposits useable for concrete are mostly depleted. As sand and gravel deposits in the Bay Area have been nearly depleted, it has become necessary to rely more on crushed stone for construction aggregates, or to truck the materials in from Santa Cruz and San Benito Counties.

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The salt extraction industry is centered around the San Francisco Bay, particularly in the south Bay Area. Large amounts of the material have been obtained at Newark by solar evaporation in salt ponds in northern Santa Clara County and southern Alameda County.

Draft 1994 General Plan Strategies

Strategies associated with preserving and managing mineral resource extraction can be found in the Resource Conservation Chapter for the Rural Unincorporated Area, and are listed below.

Strategy 1: Ensure continual availability of mineral resources.

Strategy 2: Mitigate environmental impacts of extraction and transport.

Strategy 3: Reclaim sites for appropriate subsequent land uses.

Policies and Regulations

A. Plan Policies that Foster Environmental Protection

Policies from the 1980 General Plan

Existing resource sites and access routes should be preserved from incompatible land uses that would preclude or limit mineral resource availability [R-RC 69]. EIRs are required for proposed new quarries or expansion of existing extraction operations [R-RC 72]. Extraction of mineral resources shall be conditioned and regulated to mitigate environmental impacts of various kinds [R-RC 73]. Quarries visible from valley floor locations are discouraged where visual impacts cannot be mitigated [R-RC 75]. Access to new quarry sites should utilize major thoroughfares and avoid local-serving routes as much as possible to minimize impacts on local roads and neighboring uses [R-RC 77-78]. Reclamation plans and implementation are conditions of any use permit for mineral extraction areas [R-RC 80].

Substantive Policy Changes in the Draft 1994 General Plan

There are no new or significantly revised mineral resource policies in the Draft 1994 General Plan, although old policies have been consolidated for simplicity and less redundancy. Some policies are deleted from the Land Use Element, and placed in the Conservation Element, "Quarries" are no longer identified on the Land Use Map.

B. Ordinances and Regulations that Reduce Impacts

Zoning Ordinance - Surface Mining and Land Reclamation (Sec. 36-4)

The zoning ordinance allows surface mining in any zone subject to a use permit.

County Surface Mining and Land Reclamation Standards

The intent of these standards is to assure that the production and conservation of minerals is encouraged; that adverse environmental effects are prevented or minimized; that mined lands are reclaimed to ensure the future usefulness of the land after extraction ceases; and that these goals are achieved with full consideration for neighboring uses.

Conditions of approval include requirements for control of dust, noise, drainage, erosion, pollution, traffic safety, hours of operation and visual screening, among other conditions. The intent of these controls is to reduce environmental impacts and to avoid nuisances to neighboring properties. Periodic inspection and reports are required of the operation to ensure compliance with conditions of approval. A reclamation plan must also be approved before the use permit is issued. Financial assurances are required to ensure proper reclamation of an area that has been subject to surface mining.

Impacts and Mitigations

Impact 1. Potential Loss of Mineral Resources. Residential development may intrude upon existing quarries and/or transport sites. This development in the rural areas where the County General Plan policies apply is very low density, and compared with existing development in these areas, is not anticipated to affect quarries or their operations. It should be noted that the County's plan to delete the Quarry designation from the General Plan Map legend is to provide consistency as these uses are not shown on the map itself.

The County currently requires a Use Permit and EIR for new quarry projects and/or expansions to existing sites. Therefore, any potential impacts to mineral resources and/or potential conflicts with residential uses would be fully analyzed at that time. *No significant impacts to mineral resources are anticipated.*

Mitigation Measures: No further mitigation is required.

Impact 2. Quarry/Residential Use Incompatibilities. Residences in close proximity to quarry sites and/or transport routes may be subject to quarry-related noise (from rock-crushing and other mining equipment) and truck-related noise and traffic.

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Dependent upon the topography of the land and the proximity to the quarry, noise levels can be severe. Additionally, quarries can also cause visual impacts as they are usually located above the valley floor. Policies which address this issue include R-RC 72 which requires an EIR for all proposed new quarries or expansion of existing operations; R-RC 73 which states that extraction of mineral resources shall be conditioned and regulated to mitigate environmental impacts of various kinds; R-RC 75 which states that quarries visible from the valley floor are discouraged where visual impacts cannot be mitigated; and R-RC 77-78 which require that access to new quarry sites utilize major thoroughfares and avoid local-serving routes as much as possible. *If the above policies are implemented, they should reduce the impact to a level of insignificance..*

Mitigation Measures: No further mitigation is required.

Endnotes to Agriculture and Mineral Resources Chapter

1. Approximately 400 new parcels are expected to be created, 18% in the "A" area for a total of 72 new parcels.
2. Table 5A-3 shows this figure is derived by dividing 8,220 acres by 69 parcels.
3. This figure is derived from Table 5A-7: 39 "A" area projects divided by 128 non-residential projects in the rural unincorporated area = 30%.
4. From Table 5A-4: 8,220 acres divided by 14 years = 587 acres x 15 years life of the General Plan = 8,805 acres, (8,800 acres rounded down).
5. This figure is derived from 16,275 acres of subdivided Ranchland from Table 5A-4 divided by 330,300 acres of total Ranchland from Table 5A-9 = 5%.
6. This figure is derived from 276 permits in the Morgan Hill area, 170 in the San Martin area and 147 in the Gilroy area, for a total of 593 permits, divided by 2,241 permits overall = 26%.
7. Bill Shoe, Associate Planner, memo, August 4, 1994.

CHAPTER 5C

BIOTIC RESOURCES

Environmental Setting

Santa Clara County has a variety of terrain, including baylands, rivers, broad and narrow valleys, rolling hillsides and steep mountainous terrain that supports a diversity of habitats. Portions of the County front the San Francisco Bay, creating bayland habitats including important wetlands and marshes. There are rivers and reservoirs that support freshwater habitats including biotically rich riparian areas. There are flat valley areas and rolling hillsides that contain grassland communities including the serpentine native grasslands which are home to several threatened and endangered species. Associated with these grassland communities are oak woodlands. In the more mountainous regions are chaparral and forests.

The biotic resources within Santa Clara County's rural unincorporated areas, as described in this EIR, were identified through review of existing information, data bases, and aerial photo interpretation. The presence of rare, threatened or endangered species was determined on the basis of existing mapped data; new surveys were not conducted to verify them. New composite maps were prepared to meet Draft 1994 General Plan needs to associate biotic resources with land use designations. However, not all riparian, wetland or oak woodland habitats were mapped. More detailed field mapping may be necessary to accurately portray the extent of biological resources for some development and/or regulatory permit processes. Detailed biotic surveys will be required for individual development projects if they are located in a sensitive area.

The presence of rare, threatened and endangered species or habitat for such species was evaluated through a literature review, personal communication with local experts and correspondence from regulatory agencies in Santa Clara County. Printouts (1993) for each of the 34 USGS quadrangles in the California Natural Diversity Data Base (CNDDB), on file with the County, were utilized to determine the locations of sensitive species and their habitats. The California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants of California (CNPS, 1994) and consultation with the local chapter were used to evaluate the presence of plant species listed by CNPS. Plant taxonomy is according to The Jepson Manual (Hickman, 1993).

Tables 5C-2 and 5C-3 (in the Biotic Resources Appendix) list the special status and rare and endangered species, respectively, that may be found in Santa Clara County. Lists of estuarine and freshwater fishery resources of the County follow in Table 5C-4 and 5C-5 of the same appendix.

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The *Significant Natural Areas Program* administered by the California Department of Fish and Game has identified a number of unique sites in Santa Clara County that support special status animals or plants, or plant communities of limited distribution. These and riparian corridors (which are habitats of high biological values that may not contain rare and endangered species), are depicted in Figure 5C-1. These areas, which range from small sites up to approximately 6,000 acres, support more than one special status species. Table 5C-1 lists the plant and/or animal species that have been recorded within each areas keyed to the land use designation for the area. It should be noted that additional areas of biotic sensitivity may exist within the County which have not been identified by the above programs.

A. **Bayland Habitats**

Baylands are an important factor affecting the climate and ecosystem of San Francisco Bay and Santa Clara County. They include the waters of San Francisco Bay, estuaries, mud flats, salt marshes, salt ponds and levees. Bayland habitats occur within the Palo Alto, Mountain View and Milpitas areas. The extent of pre-European bayland habitat has declined significantly since the development of the San Francisco Bay Area.

Seasonal and year-round habitat for many thousands of birds are provided by the various bayland communities. In addition, the baylands provide habitat for several species of rare, threatened or endangered birds and mammals. The various bayland habitats are described below.

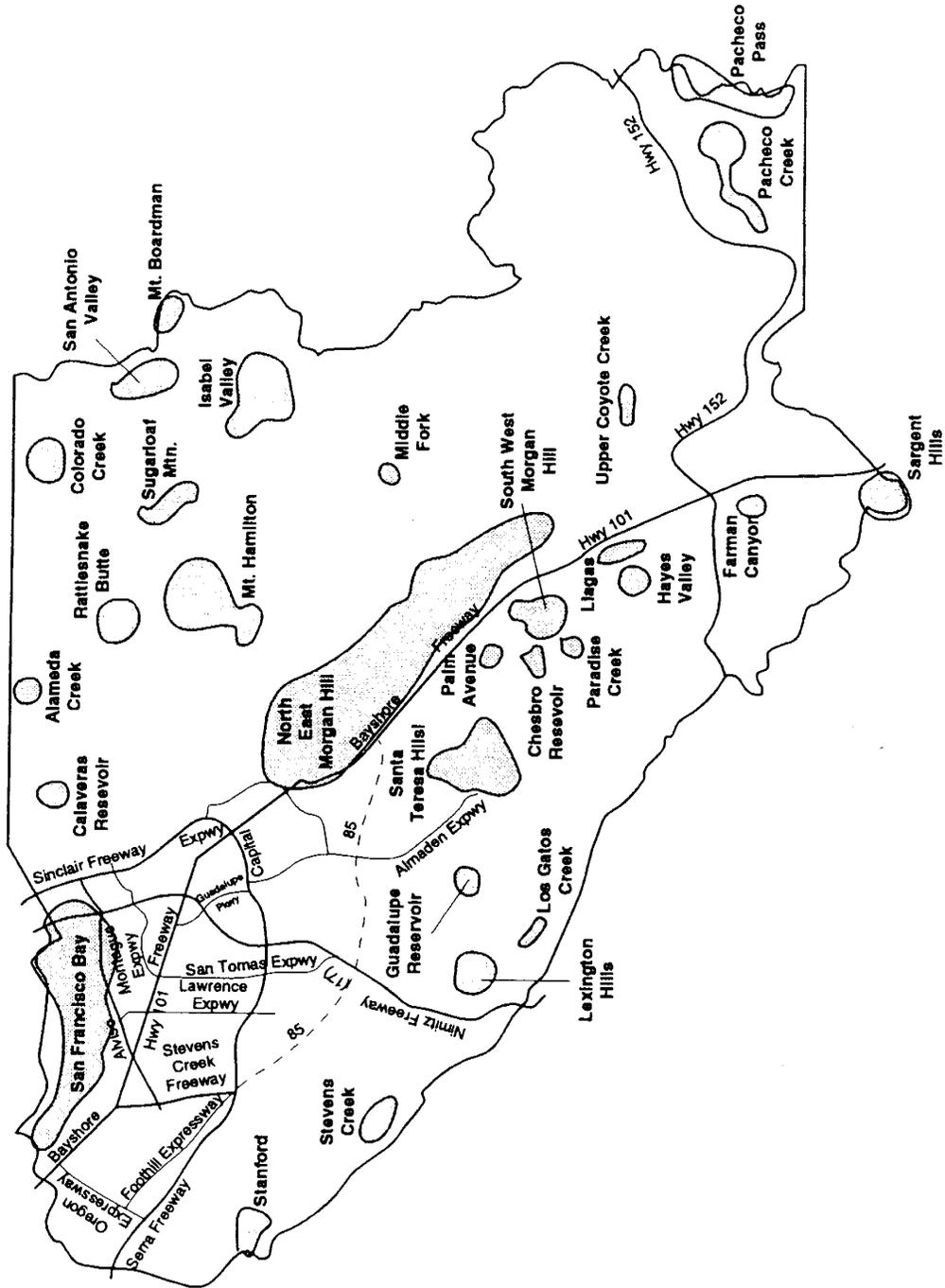
Vegetation Resources

Estuary. Estuaries are transition zones between fresh water and salt water. In Santa Clara County, estuaries are in the flatlands which rim San Francisco Bay, where freshwater streams originating in the Santa Cruz Mountains and Diablo Range meet the Bay. Estuaries are characterized by salinity fluctuation caused by freshwater inflow from streams and precipitation runoff, and by salt water intrusion during tidal cycles. Species are limited to those which can tolerate a wide range of salinities.

The marsh vegetation associated with estuaries is adapted to the brackish water conditions. Marsh vegetation occurs in zones associated with the depth, frequency, and duration of tidal inundation. The marsh contains hydrophytic plant species that are adapted to growth in an aqueous environment, saturated soils, or periodically inundated areas.

Representative species in the brackish marsh are common tule (*Scirpus acutus* var. *occidentalis*), California tule (*Scirpus californicus*), jaumea (*Jaumea carnosae*), brass buttons (*Cotula coronopifolia*), saltgrass (*Distichlis spicata*), cattails (*Typha latifolia*, *T. angustifolia*, and *T. domingensis*), three-square (*Scirpus americanus*), and prairie bulrush (*Scirpus robustus*).

Figure 5C-1 Significant Natural Areas of Santa Clara County



LEGEND

Significant Natural Areas

NORTH
NO SCALE

Sources: Santa Clara County Planning Office, Habitat Restoration Group

Planning Analysis & Development

Santa Clara County Draft 1994 General Plan EIR

TABLE 5C-1
Key to the Santa Clara County Sensitive Biotic Resources Map

AREA	AREA NAME	LAND USES IN VICINITY
A	ALAMEDA CREEK Wildlife Species Foothill yellow-legged frog (<i>Rana boylei</i>)	Ranchlands (R) Public Land (PL)
B	CALAVERAS RESERVOIR Wildlife Species Great blue heron (<i>Ardea herodias</i>)	Public Land (PL) Hillsides (H) Ranchlands (R)
C	CHESBRO RESERVOIR (serpentine) Plant Communities Serpentine bunchgrass Plant Species Coyote ceanothus (<i>Ceanothus ferrisae</i>) Most beautiful jewel-flower (<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>) Santa Clara Valley dudleya (<i>Dudleya setchelli</i>) Wildlife Species California tiger salamander (<i>Ambystoma californiense</i>) Edgewood blind harvestman (<i>Microcina edgewoodensis</i>)	Hillsides (H) Ranchlands (R) Rural Residential (RR)
D	COLORADO CREEK Plant Species Talus fritillary (<i>Fritillaria falcata</i>)	Ranchlands (R)
E	FARMAN CANYON Wildlife Species California tiger salamander (<i>Ambystoma californiense</i>)	Open Space Reserve (OR) Urban Service Area (USA) Roadside Services (RS) Agriculture-large (AL)
F	GUADALUPE RESERVOIR HILLS (serpentine) Plant Species Mt. Hamilton thistle (<i>Cirsium fontinale</i> var. <i>campylon</i>)	Hillsides (H) Public Land (PL) Regional Park (P)
G	HAYES VALLEY (serpentine) Plant Species Santa Clara Valley dudleya (<i>Dudleya setchelli</i>) Wildlife Species Bay checkerspot butterfly (<i>Euphydryas editha bayensis</i>)	Rural Residential (RR) Hillsides (H) Agriculture-medium (AM)
H	ISABEL VALLEY Plant Species Mt. Diablo phacelia (<i>Phacelia phacelioides</i>) Mt. Hamilton coreopsis (<i>Coreopsis hamiltonii</i>) Mt. Hamilton thistle (<i>Cirsium fontinale</i> var. <i>campylon</i>) Mt. Hamilton jewel-flower (<i>Streptanthus callistus</i>)	Ranchlands (R)

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I	LEXINGTON HILLS (serpentine) Plant Species Metcalf Canyon jewel-flower (<i>Streptanthus albidus</i> ssp. <i>albidus</i>)	Parks (P) Hillsides (H) Public Lands (PL)
J	LLAGAS (serpentine) Plant Species Metcalf Canyon jewel-flower (<i>Streptanthus albidus</i> ssp. <i>albidus</i>)	Rural Residential (RR) Agriculture-medium (AM)
K	LOS GATOS CREEK Wildlife Species California red-legged frog (<i>Rana aurora draytoni</i>)	Public Lands (PL) Hillsides (H)
L	MIDDLE FORK Plant Species Mt. Hamilton jewel-flower (<i>Streptanthus callistus</i>)	Public Lands (PL) Ranchlands (R)
M	MT. BOARDMAN Plant Species Mt. Diablo phacelia (<i>Phacelia phacelioides</i>)	Ranchlands (R)
N	MT. HAMILTON Plant Species Mt. Diablo phacelia (<i>Phacelia phacelioides</i>) Mt. Hamilton coreopsis (<i>Coreopsis hamiltonii</i>) Rock sanicle (<i>Sanicula saxatilis</i>) Wildlife Species California tiger salamander (<i>Ambystoma californiense</i>) Foothill yellow-legged frog (<i>Rana boylei</i>)	Public Land (PL) Ranchlands (R) Educational (E/I)

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<p>O</p>	<p>NORTHEAST MORGAN HILL (serpentine) Plant Communities Serpentine bunchgrass Plant Species Coyote ceanothus (<i>Ceanothus ferrisae</i>) Fragrant fritillary (<i>Fritillaria liliacea</i>) Metcalf Canyon jewel-flower (<i>Streptanthus albidus</i> ssp. <i>albidus</i>) Most beautiful jewel-flower (<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>) Mt. Hamilton thistle (<i>Cirsium fontinale</i> var. <i>campylon</i>) Santa Clara Valley dudleya (<i>Dudleya setchelli</i>) Wildlife Species California red-legged frog (<i>Rana aurora draytoni</i>) California tiger salamander (<i>Ambystoma californiense</i>) Edgewood blind harvestman (<i>Microcina edgewoodensis</i>) Great blue heron (<i>Ardea herodias</i>) San Joaquin kit fox (<i>Vulpes macrotic mutica</i>) Bay Checkerspot Butterfly (<i>Euphydryas editha bayensis</i>)</p>	<p>Hillsides (H) Public Land (PL) Agriculture-large (AL) Agriculture-medium (AM) Rural Residential (RR) Regional Park (P)</p>
<p>P</p>	<p>PACHECO CREEK Plant Communities Sycamore alluvial woodland Wildlife Species Prairie falcon (<i>Falco mexicanus</i>)</p>	<p>Ranchlands (R) Roadside Services (RS)</p>
<p>Q</p>	<p>PACHECO PASS Wildlife Species San Joaquin kit fox (<i>Vulpes macrotic mutica</i>)</p>	<p>Ranchlands (R)</p>
<p>R</p>	<p>PALM AVENUE Plant Species Most beautiful jewel-flower (<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>) Santa Clara Valley dudleya (<i>Dudleya setchelli</i>)</p>	<p>Agriculture-medium (AM) Agriculture-large (AL) Ranchlands (R) Hillsides (H)</p>
<p>S</p>	<p>PARADISE CREEK Plant Species Santa Clara Valley dudleya (<i>Dudleya setchelli</i>)</p>	<p>Rural Residential (RR) Ranchlands (R) Agriculture-medium (AM)</p>
<p>T</p>	<p>RATTLESNAKE BUTTE Wildlife Species Prairie falcon (<i>Falco mexicanus</i>)</p>	<p>Ranchlands (R)</p>

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U	<p>SAN ANTONIO VALLEY Plant Species Mt. Diablo phacelia (<i>Phacelia phacelioides</i>) Mt. Hamilton thistle (<i>Cirsium fontinale</i> var. <i>campylon</i>) Sharsmith's harebell (<i>Campanula sharsmithiae</i>)</p>	<p>Ranchlands (R) Public Lands (PL)</p>
V	<p>SAN FRANCISCO BAY Plant Communities Northern coastal salt marsh</p> <p>Wildlife Species Burrowing owl (<i>Athene cunicularia</i>) California brackishwater snail (<i>Mimic tryonia</i>) California clapper rail (<i>Rallus longirostris obsoletus</i>) California least tern (<i>Sterna antillarum browni</i>) Saltmarsh common yellowthroat (<i>Geothlypis trichas sinuosa</i>) Saltmarsh harvest mouse (<i>Reithrodontomys raviventris</i>)</p>	<p>Parks (P) Public Land (PL) Transportation (T) Baylands (B)</p>
W	<p>SANTA TERESA HILLS (serpentine) Plant Species Most beautiful jewel-flower (<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>) Mt. Hamilton thistle (<i>Cirsium fontinale</i> var. <i>campylon</i>) Santa Clara Valley dudleya (<i>Dudleya setchelli</i>)</p> <p>Wildlife Species Bay checkerspot butterfly (<i>Euphydryas editha bayensis</i>) Black swift (<i>Cypseloides niger</i>) Edgewood blind harvestman (<i>Microcina edgewoodensis</i>) Golden eagle (<i>Aquila chrysaetos</i>) Tricolored blackbird (<i>Agelaius tricolor</i>)</p>	<p>Hillsides (H) Rural Residential (RR) Parks (P) Open Space (OR)</p>
X	<p>SARGENT HILLS Wildlife Species Bank swallow (<i>Riparia riparia</i>) Tricolored blackbird (<i>Agelaius tricolor</i>)</p>	<p>Ranchlands (R)</p>

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Y	SOUTHWEST MORGAN HILL (serpentine) Plant Communities Serpentine bunchgrass Plant Species Coyote ceanothus (<i>Ceanothus ferrisae</i>) Most beautiful jewel-flower (<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>) Santa Clara Valley dudleya (<i>Dudleya setchelli</i>) Wildlife Species California tiger salamander (<i>Ambystoma californiense</i>) Edgewood blind harvestman (<i>Microcina edgewoodensis</i>) Bay Checkerspot Butterfly (<i>Euphydryas editha bayensis</i>)	Hillsides (H) Urban Service Area (USA) Agriculture-medium (AM) Agriculture-medium (AL)
Z	STANFORD Wildlife Species California tiger salamander (<i>Ambystoma californiense</i>) San Francisco forktail damselfly (<i>Ischnura gemina</i>)	Educational (E) Urban Service Area (USA)
AA	STEVENS CREEK Wildlife Species Long-eared owl (<i>Asio otus</i>)	Public Lands (PL) Hillsides (H)(small amount)
AB	SUGARLOAF MOUNTAIN Plant Species Brandegee's eriastrum (<i>Eriastrum brandegeae</i>) Mt. Diablo phacelia (<i>Phacelia phacelioides</i>) Mt. Hamilton coreopsis (<i>Coreopsis hamiltonii</i>)	Ranchlands (R)
AC	UPPER COYOTE CREEK Plant Communities Sycamore alluvial woodland	Hillsides (H) Ranchlands (R)
Source: <i>The Habitat Restoration Group</i>		

Sensitive species that may occur within the estuary habitat include Point Reyes bird's beak and the delta tule pea. These may occur within the San Francisco Bay sensitive resource area. These are not in Table 5C-1 because they have not been documented by CNDDDB.

Salt Marsh. Salt marshes occupy a zone above the mud flat, from just below mean tide level to the level of the highest tides among the Bay rim. Although the zone is vegetated, the species diversity is limited by tidal fluctuations.

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The salt marsh is characterized by a dense association of low-growing herbaceous, perennial species. These species are adapted to salt water and high concentrations of salt and tend to be dormant in the winter season when water levels are periodically elevated. The distribution of species in the salt marsh is stratified in relation to inundation. For example, pickleweed (*Salicornia virginica*), a species that grows along the edge of the water, can survive periodic and prolonged inundation.

The species that are characteristic of the salt marsh are pickleweed, saltgrass, jaumea, alkali heath (*Frankenia salina*), fat hen (*Atriplex triangularis*), and marsh gumplant (*Grindelia stricta* var. *angustifolia*). Sensitive species that may occur within the salt marsh habitat include Point Reyes bird's beak and the delta tule pea. These may occur within the San Francisco Bay sensitive resource area.

Levee and Salt Ponds. Levees are raised earthen berms or dikes, both man-made and of natural origin, that occur around San Francisco Bay. Levees are less saline than other bayland communities.

Small earthen levees will be periodically inundated or saturated such that salt marsh or brackish marsh communities will cover the levee. On taller earthen levees, the base of the levees support salt marsh or brackish marsh communities and the upper slopes and top of the levee will have an upland plant community. The upland portions of the levees have native and non-native herbs and grasses. Representative species include saltgrass, Australian saltbush (*Atriplex semibaccata*), poison hemlock (*Conium maculatum*), and perennial peppergrass (*Lepidium latifolium*). The salt ponds are water-filled areas around the rim of the bay which have been diked for salt evaporation. These areas are not vegetated.

Wildlife Resources

The bayland habitats tend to be relatively uniform and simple in their habitat structure, and as such, have fewer niches for wildlife than upland habitats. The number of different wildlife species in this habitat is low, compared to upland habitats; however the number of individuals of a given species may be quite high.

Wildlife use of the salt marshes, estuaries, and mud flats in the north end of Santa Clara County provide valuable habitat for several wildlife species. Fluctuating water levels due to tidal influence create a steady influx of nutrients into intertidal areas supporting a rich benthic community. At lower tides the exposed bayland habitats are utilized by various avian and terrestrial wildlife species. The tidal regime is important in the cycling of nutrients in the south Bay's ecosystem, which also affects wildlife utilization of these areas.

Amphibians and Reptiles. Amphibian and reptile use of the bayland habitats tends to be limited, due to the relatively high salinity. Amphibians are not expected to breed in tidal wetlands, however, reptiles from adjacent ruderal, grassland and riparian habitats may forage

in the marsh. Typical reptile species include common garter snake, western terrestrial garter snake, western aquatic garter snake, and gopher snake. Habitat for sensitive species occurs in the San Francisco Bay sensitive resource area, based upon known occurrences recorded by the CNDDDB (see Figure 5C-1.)

Birds. The vegetative structure of the bayland habitats provides suitable cover and nest sites for a variety of birds, including shorebirds, raptors, waterbirds, and passerines. Northern harrier, mallard, cinnamon teal, gadwall, American avocet, black-necked stilt, and savannah sparrow are expected to breed in this habitat. American pipit and white-crowned sparrows are expected to occur in the brackish water marsh during the non-breeding season. Barn owl, short-eared owl, American peregrine falcon, merlin, American kestrel, and northern harrier forage in this habitat for small mammals and birds. During periods of inundation the bayland habitats provide foraging sites for black-necked stilt, greater yellowlegs, marbled godwit, willet, long-billed curlew, whimbrel, herons, and egrets.

Special status species, including the California black rail, California clapper rail, and salt marsh song sparrow, American white pelican, California brown pelican, double-breasted cormorant, California gull, Caspian tern, Forster's tern, and California least tern depend on the baylands for breeding and foraging areas. Habitat for sensitive species occurs in the San Francisco Bay sensitive resource area, based upon known occurrences recorded by the CNDDDB (see Figure 5C-1 in the Biotic Resources Appendix).

Mammals. The coastal salt/brackish water marsh supports State Species of Special Concern mammals such as salt marsh wandering shrew and state and federal endangered salt marsh harvest mouse. Habitat for sensitive species occurs in the San Francisco Bay sensitive resource area, based upon known occurrences recorded by the CNDDDB (see Figure 5C-1 in the Biotic Resources Appendix).

The vegetation of this habitat provides these species with seeds and foliage for forage. Species which occur in the upland transition areas (e.g., the area adjacent to marsh habitat) include California vole, house mouse, and Norway rat. Gray fox, red fox, striped skunk, and raccoon forage in this habitat during periods of low water levels.

B. Freshwater Habitats

The biotic communities that constitute the freshwater habitats are flowing streams, riparian zones, freshwater marshes, and lentic zones. Numerous freshwater streams originate in the Santa Cruz Mountains and the Diablo Range and flow across the valley floor to the Bay. Some creeks, such as Uvas Creek in South County, flow into the Pajaro River then into Monterey Bay. Associated with these streams and creeks are freshwater marshes, and several natural and man-made percolation ponds and reservoirs.

This freshwater system provides a valuable resource and wildlife habitat. The streams provide spawning habitat for anadromous fish, such as Chinook salmon and steelhead trout, and foraging areas for many species of amphibians, reptiles, birds and mammals. Marshes and ponded areas provide breeding areas for insects and amphibians, as well as resting and feeding areas for migratory birds. Representative examples of freshwater habitats in the County include: riparian woodlands and freshwater ponds.

Vegetation Resources of Freshwater Habitats

Riparian Habitat. At higher elevations, the streams are small, have a steep gradient, cool water, coarse substrate, clear water, high oxygen levels, and abundant riffle habitat. At lower elevations the streams become larger, with lower gradients, warmer water, finer substrates, more turbid water, lower oxygen levels, and more pool habitat. Stream vegetation may consist of rooted aquatic plants, emergents, and filamentous algae. Riparian vegetation occurs along the banks of streams. Plant community makeup, which depends upon the steepness of the channel and the frequency of flooding, can include trees, shrubs and emergents.

In the lower elevations, the plants in the riparian zone are adapted to the saturated soil and/or high water table that occurs along streams. Emergent and hydrophytic species occur along the edge of the channel and in alluvial areas. Trees such as white alder (*Alnus rhombifolia*), cottonwood (*Populus fremontii*), and various willows (*Salix* spp.) tend to occur along the water's edge. Other riparian trees growing along the banks of creeks include sycamore (*Platanus racemosa*), box elder (*Acer negundo*), California bay (*Umbellularia californica*), coast live oak (*Quercus agrifolia*), and valley oak (*Quercus lobata*). The understory is generally composed of non-native grasses interspersed with dense low-growing shrubs, California blackberry (*Rubus ursinus*) vines, and Himalaya berry (*Rubus discolor*) thickets. Common shrubs are blue elderberry (*Sambucus mexicana*), poison oak (*Toxicodendron diversilobum*) and coyote brush (*Baccharis pilularis*). Non-native invasive species such as periwinkle (*Vinca major*), English ivy (*Hedera helix*), elm (*Ulmus* sp.), black locust (*Robinia psuedoacacia*), and eucalyptus (*Eucalyptus globulus*) also occur in riparian zones. Intermittent streams at higher elevations commonly have an open overstory of coast live oak trees and an understory of shrubs.

Freshwater Marsh. Freshwater marshes occur where permanent streams become slow-flowing, warm and shallow, and contain a low level of dissolved oxygen. This zone supports emergents and algae. Lentic zones are areas of standing water that include agricultural ponds, reservoirs and percolation ponds in Santa Clara County. Agricultural ponds, which are relatively permanent, may support freshwater marsh emergent vegetation along their shorelines. Reservoirs usually support only algae, because of fluctuating water levels. Percolation ponds, which provide for groundwater recharge, support fish populations that migrate from upstream. Ponds frequently develop freshwater marsh vegetation along the banks and weed growth in open water.

Freshwater marsh vegetation occurs in oxygen deficient soil resulting from inundation and saturation, and has characteristic structural, physiological and reproductive adaptations. The freshwater marsh can be associated with perennial and intermittent streams, seeps, springs and ponded water. The community is stratified into zones dependent on the water tolerance of the plants. For example, emergent species can have submerged roots; however, hydrophytic herbs generally grow in saturated soil. Typical freshwater marsh species are California tule, common tule, cattails, paniced bulrush (*Scirpus microcarpus*), three square, burreed (*Sparganium eurycarpum*), smartweed (*Polygonum spp.*), and bog rush (*Juncus effusus*).

Mt. Hamilton thistle is a sensitive species that may occur within freshwater marsh habitat (i.e., serpentine marshes/seeps) within the Guadalupe Reservoir Hills sensitive resource area.

Wildlife Resources of the Freshwater Habitats

Freshwater habitats, which include the flowing streams, riparian zones, freshwater marshes, and lentic zones mentioned above, account for the majority of the vertebrate and invertebrate biomass in the Santa Clara Valley. The freshwater habitats in the County support a high diversity of terrestrial wildlife species due to the numerous cover, roosting, nesting, and foraging sites provided by the abundant plant growth and the stratified nature of the vegetation. The riparian corridors and freshwater marshes are especially valuable as a refuge for wildlife, and provide movement corridors for species between adjacent habitats.

Sensitive species utilizing freshwater sources include red-legged frog, Foothill yellow-legged frog, and Edgewood blind harvestman. Habitat for sensitive species occurs in the Alameda Creek, Chesbro Reservoir, Farman Creek, Los Gatos Creek, Mt. Hamilton, North East Morgan Hill, South West Morgan Hill and Stanford sensitive resource areas, based upon known occurrences recorded by the CNDDDB.

Amphibians. Amphibians are an important ecological component of freshwater habitats. The presence of water, abundant dead and fallen woody material, and the high productivity of insects associated with deciduous vegetation makes this habitat highly suitable for several amphibian species. The aquatic environment offers an important resource to many frogs, toads, and salamanders that require standing water to complete their life cycles. Dead and downed woody material provides cover which moderates temperatures during the dry season, and creates suitable microclimates for amphibians. The high productivity of insects provides amphibians with an abundant food source. Some of the amphibian species known to use the freshwater habitats in the County include California slender salamander, arboreal salamander, California tiger salamander, Pacific treefrog, bullfrog, and western toad.

Reptiles. The mesic environment of these habitats is suitable for a variety of moisture dependent/tolerant reptile species, as well as those species which occur in dry situations. The abundance of dead and downed woody material offers suitable cover and rest sites, while the abundance of insects provides an important food source. Small mammals and amphibians

occurring in this habitat are important food resources for snakes. Reptiles known or expected to occur in these habitats include western fence lizard, northern alligator lizard, southern alligator lizard, sharp-tailed snake, ring-necked snake, western terrestrial garter snake, common garter snake, San Francisco garter snake, and common kingsnake.

Birds. Birds are the most numerous and diverse faunal group within the freshwater and riparian habitats. The dense and diversified vegetation provides cover, forage, and nesting and roosting sites. The aquatic habitat provides various bird species opportunities for foraging, drinking, and bathing. These habitats are an essential resource for migratory birds, offering a resting area where fat reserves can be replenished before continuing long distance flights between wintering and breeding grounds. As a result of migratory and local movements, reproduction, and seasonally changing habitat requirements, bird species richness and diversity in this habitat varies from season to season. Some of the common representative birds include green-backed heron, belted kingfisher, Anna's hummingbird, downy woodpecker, black phoebe, Pacific-slope flycatcher, Swainson's thrush, Wilson's warbler, warbling vireo, black-headed grosbeak, chestnut-backed chickadee, Bewick's wren, bushtit, California towhee, ruby-crowned kinglet, yellow-rumped warbler, yellow warbler, and song sparrow.

Mammals. Most of the mammalian species using freshwater and riparian habitats in the County are largely year-round residents. While some of these are abundant in freshwater or riparian areas, many are dependent on these habitats for food, water, dispersal corridors, and escape and thermal cover. The moist ground conditions and the large population of invertebrates within the soil and woodland litter are especially suitable for insectivorous mammals such as shrews and moles. The vegetated corridor functions as an important passage for the movement of predatory mammals such as gray fox, weasel, and skunk. The shade and presence of water throughout the year make this habitat suitable as refuge for many species occurring in the surrounding dry habitats.

Some of the mammal species of known or potential occurrence in these habitats include Virginia opossum, broad-footed mole, brush rabbit, raccoon, striped skunk, red fox, gray fox, long-tailed weasel, dusky-footed woodrat, and deer mouse.

C. Grassland/Savanna Habitats

The grassland communities occur on the valley floors and hillsides where moisture is low and evaporation is high. The native habitat has been significantly altered by the introduction of non-native annual grasses and weeds. Examples of grassland habitats with sensitive species are the Chesbro Reservoir, Colorado Creek, Guadalupe Reservoir Hills, Hayes Valley, Isabel Valley, Mt. Hamilton, North East Morgan Hill, Pacheco Creek, San Antonio Valley, Santa Teresa Hills, South West Morgan Hill, and Stanford sensitive resources areas (see Figure 5C-1).

Vegetation Resources of Grassland/Savanna Habitats

Grassland. This community occurs in valley bottoms, hillsides and on ridges where moisture is confined to rainfall, runoff and evaporation due either to high temperatures (valleys) or to wind desiccation (hills and ridges). This area supports low-growing grasses and herbs, most of which are non-native introduced species. These annuals can tolerate long summer droughts by growing during the spring and early summer and producing seeds which survive the summer.

Native bunchgrasses are dominant in the serpentine grasslands; however, bunchgrasses, such as California oat (*Danthonia californica*) and purple needlegrass (*Nassella pulchra*), are sparsely distributed in the grasslands of Santa Clara County. Native and non-native herbs are the dominant component of grasslands. Common native wildflowers are California poppy (*Eschscholzia californica*), blue-eyed grass (*Sisyrinchium bellum*), blue dicks (*Dichelostemma capitatum*), California buttercup (*Ranunculus californicus*), and lupine (*Lupinus* sp.). Non-native herbs include mustards (*Brassica* spp.), wild radish (*Raphanus sativus*), filaree (*Erodium* spp.), and yellow star thistle (*Centaurea solstitialis*).

Serpentine grasslands are unique; they are one of the few habitats where native grassland species successfully compete with non-native grass species. The serpentine-based soils are a harsh environment making it difficult for non-native species to survive. Serpentine grasslands are hosts to numerous threatened and candidate species including: fountain thistle (*Cirsium fontinale* ssp. *fontinale*), Santa Clara Valley dudleya (*Dudleya setchellii*), Marin dwarf-flax (*Hesperolinon congestum*), Metcalf Canyon jewelflower (*Streptanthus albidus* ssp. *albidus*), uncommon jewelflower (*Streptanthus albidus* ssp. *peramoenus*), and coyote ceanothus (*Ceanothus ferrisae*).

The oak savanna community occurs in foothills along valley edges and is characterized by a mixture of grassland and scattered oaks.

Wildlife Resources of Grassland Habitats

In Santa Clara County there are numerous special status wildlife species associated with grassland communities, especially given the presence of several serpentine areas. Grasslands provide an important buffer from urbanization as well as provide habitat resources to wildlife.

The grasses and forbs produce an abundance of seeds and attract numerous insects, thereby providing food for a variety of rodents, seed-eating birds and insectivores. These species form the prey base for large predators. Aerially-foraging species, such as bats and swallows, occur in grassland habitats in search of flying insects.

Grassland habitat with sensitive wildlife species are within the Chesbro Reservoir, Farman Canyon, Hayes Valley, Mt. Hamilton, North East Morgan Hill, Pacheco Creek, Santa Teresa Hills, South West Morgan Hill, and Stanford sensitive resources areas (see Figure 5C-1).

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Invertebrates. The Bay Checkerspot butterfly is listed as a Federally Threatened species under the Endangered Species Act. The Bay Checkerspot is known to inhabit serpentine grassland habitat containing the two larval food plants Annual Plantain (*Plantago erecta*) and owl's clover (*Orthocarpus densiflorus*). The Opler's Longhorn Moth (*Adela oplerella*) is a candidate species which has been petitioned for listing as Threatened or Endangered. The main food plant for this moth is cream cups (*Platystemon californicus*).

Amphibians. Amphibian use of this habitat is limited due to its arid nature. A few species, such as California tiger salamander, Pacific treefrog and western toad, may disperse into these habitats from nearby breeding sites and to forage, and use rodent burrows for shelter during the dry season.

Reptiles. Reptiles are common in grassland habitats. The tall grasses and occasional scattered shrubs provide excellent cover and support prey populations of insects and rodents. Rodent burrows provide additional refuge for snakes and lizards. The western fence lizard is the most common reptile in this habitat. Other species most likely to occur in this habitat include western skink, western yellow-bellied racer, gopher snake, common kingsnake, and western terrestrial garter snake.

Birds. Grassland habitats are used extensively by raptors, and granivorous and insectivorous birds. Commonly occurring raptors include northern harrier, red-tailed hawk, American kestrel, merlin and black-shouldered kite. Northern harriers are known to nest in grassland habitats throughout the region. Common passerine birds typical of this habitat include black phoebe, Say's phoebe, loggerhead shrike, barn swallow, savannah sparrow, house finch, lesser goldfinch, white-crowned sparrow and golden-crowned sparrow.

Mammals. The grasslands also provide food and cover for small rodents and rabbits. In turn, these mammals provide a prey base for larger predatory species. Representative mammals of this habitat include brush rabbit, black-tailed hare, Botta's pocket gopher, deer mouse, California meadow vole, western harvest mouse, striped skunk, gray fox, coyote and long-tailed weasel. Bats, such as little brown myotis and big brown bat, are expected to forage over this habitat.

D. Chaparral and Forest Habitat

The component biotic communities of the chaparral/forest habitat are chaparral, mixed evergreen forest, redwood forest, foothill woodland, and closed-cone pine forest.

Vegetation Resources of Chaparral and Forest Habitats

Chaparral. Chaparral occurs on dry, particularly south- and west-facing, slopes. This community is characterized by shrubs and shrubby trees from three to ten feet tall, with some herbaceous plants growing under them. The chaparral is subject to periodic fires, after which many shrubs recover by stump sprouting. Chaparral plants adapt to survive in a xeric environment, with long tap roots and leaves with a thick waxy cuticle and resins.

The composition of chaparral communities can range from low-growing scrub communities to dense, impenetrable stands of taller shrubs. Diablan sage scrub is a common scrub community dominated by California sage (*Artemisia californica*), sticky monkey flower (*Mimulus aurantiacus*), chamise (*Adenostoma fasciculatum*), and black sage (*Salvia mellifera*). The species composition of chaparral communities will vary; however, common chaparral species are manzanita (*Arctostaphylos* spp.), chamise, scrub oak (*Quercus berberidifolia*), California lilac (*Ceanothus* spp.), poison oak and yerba santa (*Eriodictyon californicum*). Chaparral is also associated with serpentine substrates.

Mixed Evergreen Forest. This community is associated with moist, well-drained soils and occurs in ravines and on north- and east-facing slopes. Its overstory trees range between 60 and over 100 feet tall.

The mixed evergreen forest is dominated by evergreen broadleaf trees and conifers. Representative broadleaf trees are California bay, madrone (*Arbutus menziesii*), tan oak (*Lithocarpus densiflora*), coast live oak, interior live oak (*Quercus wislizeni*), maul oak (*Quercus chrysolepis*); and the conifers include coast redwood (*Sequoia sempervirens*) and Douglas fir (*Pseudotsuga menziesii*). Two winter-deciduous trees, big-leaf maple (*Acer macrophyllum*) and buckeye (*Aesculus californica*) also occur. The understory can be diverse and stratified. Associations of herbs, shrubs, ferns, grasses and vines form the layers of the understory. Herbs include sweet cicely (*Osmorhiza chilensis*), hedge nettle (*Stachys* spp.), and bedstraw (*Galium* spp.); common shrubs are coffeeberry (*Rhamnus californica*), poison oak, hazelnut (*Corylus californica*), and snowberry (*Symphoricarpos* spp.); ferns include coastal wood fern (*Dryopteris arguta*) and bracken fern (*Pteridium aquilinum*); common grasses are western rye grass (*Elymus glaucus*) and wild oat; and the dominant vine is California blackberry.

Redwood Forest. The redwood forest occurs in the streamsides and ravines and some mountain slopes of the Santa Cruz Mountains. The redwood forest occurs in areas on summer fog. The forest can be characterized by a dense overstory and an open understory. Few species are adapted to the mesic environmental conditions in the understory, such as shade, moist soil, and a thick accumulation of leaf litter that reduces seed germination. Redwoods can occur in pure stands, groves, and be intermixed with tan oak, Douglas fir and California bay trees. Dominant understory species are western sword fern (*Polystichum munitum*), redwood sorrel (*Oxalis oregana*), and huckleberry (*Vaccinium ovatum*).

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The redwood forests of the Santa Cruz Mountains have been logged. Coast redwood trees have the ability to stump sprout; therefore, for every tree cut, numerous second growth trees can sprout. Stump sprouting has resulted in an increased density of trees and shrubs in the second growth redwood forest.

Foothill Woodland. This predominately oak woodland community occurs on ridges which form the eastern crest of the Santa Cruz Mountains, and on the ridges and valleys in the western portion of the Diablo range. The overstory is fairly open. Overstory species include coast live oak, black oak (*Quercus kelloggii*), interior live oak, valley oak, canyon oak, California bay, buckeye, and big-leaf maple.

Closed-cone Pine Forest. The closed-cone pine forest occurs at higher elevations of the County (2,000-4,000). This community is found typically in rain-shadow areas. It is characterized by pines and chaparral species adapted to drought, fire and poor soils. Conifer species are knob-cone pine (*Pinus attenuata*) and Coulter pine (*Pinus coulteri*). Dominant conifers in this community have cones that remain closed until the seeds are released by fire. The understory is generally composed of chaparral species.

Wildlife Resources of Chaparral and Forest Habitats

Chaparral/forest habitats consisting of the chaparral, mixed evergreen forest, redwood forest, foothill woodland, and closed-cone pine forests mentioned above provide suitable habitat for a high diversity of terrestrial wildlife species. Due to the availability of numerous cover, roosting, nesting, and foraging sites provided by the abundant plant growth and the stratified nature of the vegetation, this habitat is of high value to numerous species of birds, mammals, reptiles, and amphibians.

Seeds and berries typically produced by these communities attract numerous insects, thereby providing food for a variety of rodents, seed-eating birds and insectivores. These species form the prey base for large predators. Many of the bird and mammal species found in riparian and scrub habitats may also be expected to occur in forested habitats. Its dense vegetative structure provides ideal habitat for passerine bird species seeking foraging, nesting, cover, and resting sites. In addition, raptors such as Cooper's hawk and sharp-shinned hawk, specially suited for hunting in dense, heavily wooded areas, are often found foraging on birds and reptiles associated with this habitat.

Amphibians. Amphibian species which may migrate to or through this habitat in the non-breeding season include California slender salamander, California tiger salamander, Pacific treefrog, and western spadefoot toad.

Birds. Numerous avian species, most notably the larger raptors such as golden eagles, red-tailed hawks, and red-shouldered hawks, nest and forage in these areas. Smaller passerine species such as creepers, warblers, vireos, and sparrows are also found nesting and foraging in these habitats.

E. Rare, Threatened and Endangered Species

Species with special legal protection are generally termed Special Status species and are protected by federal law, state law, or both. These species are listed by the federal government as endangered, threatened, or candidate for listing; by the State of California as endangered, threatened, rare, candidate for listing, or species of special concern; or the California Native Plant Society as rare or endangered. The categories and the laws governing them are described in the Biotic Resources Appendix.

The U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG) share responsibility for the management and protection of California natural resources.

Under separate state and federal legislation, each agency conducts a detailed review and formal consultation process with the lead agency and project sponsor of a project that could affect any plant or animal species listed or proposed as rare, threatened, or endangered by the state or federal government. If a listed species may be affected, the lead agency must initiate a formal consultation with the USFWS or CDFG, as applicable under federal or state law.

Plants. The California Native Plant Society (CNPS) publishes an "Inventory of Rare and Endangered Vascular Plants in California". There are 42 species of these special status plants in Santa Clara County. The Biotic Resources Appendix contains a table of all of the plant species that are on the CNPS list but are not on the state or federal lists. These plants are considered "rare or endangered" by CNPS and under CEQA's definition of "rare or endangered". In Santa Clara County, there are no federally "endangered or threatened" plant species but there are two Candidate 1, seventeen Candidate 2, and two Candidate 3c species, and four species proposed to be listed as endangered or threatened.

As a result of a lawsuit filed by CNPS, a settlement agreement between the U.S. Fish and Wildlife Service and CNPS requires that the USFWS list 159 new plants species over a 5-year period. In Santa Clara County there are at least five plant species proposed to be listed as threatened or endangered. They are Tiburon Indian paintbrush, Coyote ceanothus, Robust spineflower, Santa Clara Valley dudleya, and Metcalf Canyon jewelflower. The Latin names are given in the Biotic Resources Appendix. These plants all grow on serpentine-based soils. The general location of known occurrences of rare, threatened or endangered plant species are depicted on Figure 5C-1.

Animals. The California Department of Fish and Game publishes a new list every year that provides updated status of all animal and plant species. According to the 1991 list, in Santa Clara County, there are eight Endangered, one Threatened, one Proposed Threatened, three Candidate 1 and fifteen Candidate 2 species on the federal list. On the state list, there are five Special Animals and twenty Species of Special Concern listed. These animal species are listed in the Biotic Resources Appendix. The general location of known occurrences of rare, threatened or endangered wildlife species are depicted on Figure 5C-1.

Fish. Within Santa Clara County, there is one species of special concern, Steelhead trout and one endangered species, the winter-run chinook salmon.

Draft 1994 General Plan Strategies

The Draft 1994 General Plan includes the following policies for habitat and biodiversity in the Resource Conservation Chapter for the Rural Unincorporated Area.

- Strategy 1: Improve current knowledge and awareness of habitats and natural areas.*
- Strategy 2: Protect the biological integrity of critical habitat areas.*
- Strategy 3: Encourage habitat restoration wherever possible.*
- Strategy 4: Evaluate the effectiveness of project mitigations as required under CEQA.*

Policies and Regulations

A. Plan Policies That Foster Environmental Protection

This section of the EIR discusses existing resource conservation policies, ordinances and regulations in the County that serve to protect the significant biological resources within the rural unincorporated environment. Please refer to the General Plan itself for actual language of the policies. For example R-RC-3 refers to policy 3 that can be found in the Rural Unincorporated Resource Conservation chapter of the Draft 1994 General Plan.

Policies from the 1980 General Plan

The Resource Conservation policies provide guidance for overall resource conservation within the County as well as guidance on specific habitat types. Specific habitat types addressed by the Draft General Plan policies include riparian, baylands, grasslands, woodlands, serpentine areas and other areas supporting high biodiversity and/or rare and endangered species.

Overall Resource Conservation Policies: Policies R-RC 1, 2, 3 and 5 provide overall guidance for resource conservation relating to future development within the county. Policy R-RC 1 provides for the protection of natural and heritage resources for ecological, functional, economic and aesthetic values. Public and private development should be environmentally sound and all reasonable steps taken to mitigate impacts (R-RC 5). On open space lands, multiple uses are encouraged so long as resource protection is not compromised, with priority given to conserving critical habitat (R-RC 3). On County-owned lands, the county, through multi-jurisdictional efforts, shall be the leader in restoration of resources (R-RC 2).

Habitat Areas of High Diversity, Sensitivity and Significance: Habitat areas within the County that support high diversity, sensitivity and significance (i.e., rare and endangered species, bay wetlands, riparian areas, serpentine geology) are identified for special consideration for preservation as open space and protection from development impacts (R-RC 24). Areas known for supporting sensitive habitats that would be addressed under R-RC 24 are depicted on Figure 5C-1 and listed on Table 5C-1.

Baylands: The County General Plan has six policies relating to allowable uses and protection of bayland wetlands (R-RC 25 - 30). These policies provide guidance to preserve and enhance wetland habitats of San Francisco Bay (R-RC-25), yet provide for allowable uses that cause little or no adverse impacts, such as passive recreational uses, marina and nature centers (R-RC 26). Filling of wetlands along the Bay is not allowed except if required for implementation of allowed uses (i.e., piers, walkways); if significant alteration of habitats occur, mitigation is required (R-RC-27).

The placement of marinas in wetlands, an allowable use under policy R-RC 26, would be permitted only if upland alternatives were found infeasible (R-RC 28). This policy also specifies that mitigation is necessary to offset impacts to resources from new marinas and that discontinued marinas should be considered for habitat restoration or other habitat preservation.

The placement of new or expanded marinas within Bayland wetland habitats is not allowed if impacts to wetlands will occur (R-RC 29). Existing closed landfills are recommended to be used as parks or open space when compatible with habitat preservation goals (R-RC 29).

Policy R-RC 30 specifies that public and private development adjacent to the Baylands and the National Wildlife Refuge should be compatible with preserving wetland habitat values and scenic qualities.

Riparian and Freshwater Resources: The County has adopted eleven policies relating to development adjacent to riparian corridors and freshwater habitats. These policies (R-RC 31 - 41) specify that natural streams and riparian areas be retained in natural condition and provide guidance for setbacks/buffer areas, design of flood control modifications, open space dedications and allowable uses within the buffer areas. The principal strategy is to protect the riparian habitat and streams from the effects of certain land uses and development through the creation

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of appropriate buffer areas and limitation of activities within and adjacent to the riparian area. Policies recommend avoidance of damage to stream environments through sensitive bridge and flood control designs, reduced use of herbicides and vegetation removal and the creation of dedicated open space areas for certain development projects. Three policies relate to the establishment of a buffer area, outward from the creek bank and impose restrictions on activities allowed within the buffer area (R-RC 37 through 39). The policies restrict the construction of buildings within the buffer area, removal of vegetation and provide protection of endangered species and scenic values. Recreational uses along the County's streams should be placed in a manner that minimizes impacts to riparian resources, such as along the edge of the buffer area (R-RC 41).

The County has also developed three implementation recommendations for these habitats (R-RC(i) 9 through R-RC(i) 11). R-RC(i) 9 and 16 recommend improved mapping and inventory of riparian areas and the evaluation of the usefulness of riparian area protection ordinances. Policy R-RC (i) 10 requires protection of riparian resources from water quality degradation. Policy R-RC (i) 11 recommends evaluation of the need for policies for buffer areas around reservoirs.

For streams which may provide spawning for anadromous fish species (i.e., steelhead trout and winter-run chinook salmon), Policy R-RC 31 requires protection from pollution and development impacts that would degrade stream quality. Streams known to provide spawning habitat for anadromous fish include Coyote Creek (downstream of Coyote dam), Guadalupe River (downstream of Guadalupe Reservoir), Pacheco Creek (and tributaries), Uvas Creek (and tributaries), Penetencia Creek, and Los Gatos Creek.

Policy R-RC 32 specifies protection of riparian and freshwater habitats through the establishment of buffer areas between the riparian habitat and adjacent development. Policy R-RC 33 requires public projects be designed to avoid impacts to stream environments and trails be allowed in riparian corridors only when impacts can be adequately mitigated through design and use controls. Two policies (R-RC 34 and 35) provide guidance on flood control issues; the policies specify restrictions for new development within floodplain areas and encourage implementation of flood control measures that enhance riparian resources and avoid significant alteration of the stream environs.

The County has established policies for the maintenance of wildlife migration corridors and habitat linkages (R-RC 51 and 52), and recognizes the importance of riparian corridors for terrestrial wildlife migration. The policies recommend preservation of habitat linkages and migration corridors where they are needed and to compensate for the effects of habitat fragmentation.

Two policies have been developed to encourage the restoration of degraded riparian habitat within the County's rural unincorporated areas (R-RC 53 and 54), for combined benefits of habitat enhancement, flood control, and preservation of water quality. County policy RU-RC 56 also encourages monitoring of project mitigation measures as to their effectiveness.

Grassland and Woodlands: The County has several policies relating to activities within grassland and woodland habitats (R-RC 42-50). The policies recognize that most grasslands in the County are being utilized for livestock grazing, including public park lands and other open space preserves which lease grazing rights. For public lands, the County has adopted a Grazing and Livestock Policy, which requires management of livestock grazing. County policies relating to grasslands stress the importance of soil conservation and minimizing soil erosion, discouraging large scale grading and clearing that may degrade habitat of surface water quality, preserving healthy specimen trees within the oak savannah, and discouraging use of off-road vehicle in areas of fragile soil during the rainy season. Policy R-RC 42 encourages soil conservation and erosion control for public projects. Large-scale grading and land clearing is limited by R-RC 43. Off-road vehicle use within fragile soil area and during the rainy periods is addressed in policy R-RC 45. Policy R-RC 44 promotes protection of healthy, mature specimen trees.

The policies recognize the mosaic of forest habitats in the County and varying economic interests (i.e., timber harvest, firewood harvests). The commercial timber harvests are under jurisdiction of the California Department of Forestry and Fire Protection (CDF) through the Forest Practice Rules of the Z'berg-Nejedly Forest Practices Act of 1973. Non-commercial timber harvesting also occurs within the Hillside and Ranchlands areas of the County under provisions of the zoning ordinance.

The County has established policies relating to timber harvesting and tree removal by encouraging best forestry practices as defined under the Forest Practice Rules, including selective harvesting, use of erosion control measures, protection of habitat and mitigation of off-site impacts (R-RC 46). For non-commercial firewood collecting, policy encourages landowners to retain some dead or downed wood for habitat values, as compatible with safety concerns (R-RC 48). New development with forest habitats are addressed by policy R-RC 47, which encourages clustered development to avoid sensitive habitat areas, open space dedications, minimizing habitat fragmentation and acquisition or avoidance of critical habitat areas. Old growth trees, especially redwoods are encouraged to be preserved (R-RC 50).

The County has also established two implementation recommendations relating to forest habitats. These include encouraging compliance with allowable timber harvesting through conservation districts, and enhanced awareness of local and CDF regulations of timber harvests. The retention and planting of native plant species is encouraged, especially for landscape uses (R-RC-49).

Substantive Policy Changes in the Draft 1994 General Plan

There are a number of substantive policy changes and additions to the Draft 1994 General Plan that distinguish it from the 1980 plan. These are discussed below.

- a. **Knowledge and Mapping of Habitat Resources:** The Draft 1994 General Plan proposes to improve the knowledge and mapping of significant/sensitive habitat resources within the rural unincorporated areas (R-RC 23). This information will be used to provide an accurate basis for reviewing proposed projects that require discretionary approvals or permits, assessing environmental impacts for projects subject to CEQA, identifying critical habitat resources, and provide cooperative conservation planning.
- b. **Proactive Habitat Protection:** A policy to develop strategies for maintaining and enhancing habitat and biodiversity is proposed (R-RC 20). This policy would encourage protection of the biological integrity (e.g., species, functions and values of habitat areas) of critical habitat areas, encourage habitat restoration, and evaluate the effectiveness of project mitigations as currently required under CEQA.
- c. **Stream and Riparian Restoration:** Policy R-RC 54 would encourage the restoration of stream channels and riparian habitat areas, wherever feasible. The policy would allow multiple uses within these areas, such as recreational trails, so long as habitat and other ecological values are preserved.
- d. **Preservation of Habitat Linkages and Migration Corridors:** The Draft 1994 General Plan proposes two policies that encourage the preservation of habitat linkages and migration corridors (R-RC 51-52). For rural area developments subject to open space dedication requirements and adjacent to other open space lands, Policy R-RC 52 encourages the utilization of a project design which maximizes the contiguity of undeveloped open space areas (e.g., providing migration corridors) and reduces fragmentation of habitat (R-RC 52).

B. Ordinances and Regulations that Reduce Impacts

The County recognizes the role of other regulatory agencies in protecting rare, threatened and endangered species (i.e., CDFG, USFWS) and the County's role to protect endangered species through CEQA and the California Endangered Species Act (CESA). The County also recognizes that coordination with regulatory agencies is required through the CEQA process, yet the responsibility of developing Habitat Conservation Plans on a sub-regional and regional scale belongs to private landowners and federal and state agencies.

The County Initial Study Checklist requires analysis of impacts to special status species and their habitat, including diversity and migration routes; unique biological areas such as freshwater marshes or saltwater tidal lands, watercourses or riparian areas and unique or heritage trees over 12" in diameter.

Subdivision Ordinance: The Subdivision Ordinance regulates the subdivision of land. All subdivision plan are reviewed in accordance with all applicable County regulations, including the Zoning Ordinance and the General Plan. During the review of the subdivision tentative map, projects are reviewed for conformity with General Plan policies for biological resources, such as tree preservation, revegetation, open space preservation, lot design, preservation of sensitive biological resources areas/critical habitat areas. Habitat linkages and setbacks to riparian areas are determined.

C. Significance Criteria

Impacts to biotic resources are considered significant if Plan policies and/or future development would result in the removal or degradation of plant communities with high botanical or wildlife value such as riparian habitat, Bayland wetlands, freshwater wetlands, and serpentine bunchgrass grasslands. Also significant are degradation of aquatic habitat for native fish and wildlife species, activities that would substantially interfere with the movement of an resident migratory fish or wildlife species and change in the diversity or quantity of species. The removal or degradation of rare, threatened or endangered plant species recognized by the U.S Fish and Wildlife Service, The California Department of Fish and Game, and the California Native Plant Society, or habitat for such species, is considered a significant impact.

Thresholds of significance for biological resources are based on current regulatory standards or guidelines for the protection of biological resources, including waters of the U.S. and wetlands, fisheries habitat, tree resources and special status species. In the absence of regulatory thresholds, impacts are based upon professional judgement regarding whether an action would significantly affect or diminish a natural resource, substantially lower overall biodiversity, substantially lower an individual species population or diminish its habitat.

Impacts and Mitigations

Impact 1. Critical Habitat Areas. Development within rural unincorporated areas of the County could result in significant direct and indirect impacts on sensitive biotic resources associated with critical habitat areas (i.e., serpentine bunchgrass communities, the baylands, freshwater habitats) and known habitat for state, federal and locally significant species, (i.e., red-legged frog habitat). Impacts could occur from direct removal of habitat by construction activities (i.e., structures, roads, placement of utilities) as well as indirect impacts from adjacent land uses (i.e., night lighting, introduction of invasive non-native plant species, degradation of habitat values from human disturbances).

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Existing County policies recommend avoidance of impacts to sensitive resources and policies proposed in the Draft 1994 General Plan encourage protection of critical habitat areas. These policies are discussed in detail on pages 5C-26, and are supplemented by policies C-RC 30, 31, 32, and 33. (see Draft 1994 General Plan). In general, implementation of policies to avoid impacts by clustering Rural Residential and Hillside development in non-sensitive area and establishing setbacks from sensitive resources would avoid or reduce most impacts. Clustering may not be adequate to reduce impacts, however, for highly constrained sites such as serpentine areas, where rare and endangered species may cover more than the minimum lot size. In these cases, clustering may not avoid or reduce impacts to a less than significant level. Based on the known occurrences of sensitive resources within areas designated Rural Residential and Hillside, locations at risk are: Chesbro Reservoir, Guadalupe Reservoir Hills, Hayes Valley, Lexington Hills, Llagas, Northeast Morgan Hill, Palm Avenue, Santa Teresa Hills and Southwest Morgan Hill. (see Figure 5C-1).

Impacts to sensitive habitat might also occur from the development of single-family homes on existing lots of records where such lots occur within the sensitive resource areas. Development of existing lots of record are often considered ministerial projects under CEQA, as they only require issuance of a building permit. Ministerial projects are considered categorically exempt from CEQA review, with one exception: projects that might impact an environmental resource of critical concern where such as resource is so designated (Section 15300, Article 19, CEQA Guidelines 1986). This would be the case for areas containing state and/or federally listed plant and animal species. They are required to consult with and obtain permits from regulatory agencies prior to taking actions which could impact the resource. The US Department of Fish and Wildlife issues a Section 10 (a) permit and the California Department of Fish and Game issues a Section 2081 permit. Associated with these permits are requirements to mitigate the impacts due to disturbing a site. The Draft General Plan has several policies to implement resource protection. Policy C-RC(i)10 calls for a Regional Habitat Conservation Plan through joint efforts of the County, cities, US Fish and Wildlife and the State Department of Fish and Game. Policy C-RC(i) 11 calls for acquisition of areas of significance through the County's Open Space Authority, MROSD, County Parks, National Wildlife Refuge and other groups and organizations. Policy C-RC(i)12 calls for evaluating inventories of natural areas and habitat types to determine the need for linkages, given the land use and development patterns and other factors. *Removal of sensitive resources would be a significant impact which in most cases could be mitigated by implementing the policies of the General Plan. As review for sensitive resources does not occur for development only requiring building permits on existing lots of record, the following mitigations are recommended:*

Mitigation Measure 1: Priority should be given to the acquisition of existing lots of record that are so constrained by sensitive resources that no developable land remains. These parcels should have priority because they only require building permits for residential development, whose issuance is not discretionary on the part of the County.

Mitigation Measure 2: In conjunction with the regional HCP, the County should expand Policy R-RC (i) 9(b) to include an educational program or brochure aimed at landowners. It should provide information on the sensitive resources within the HCP area, and best management practices (BMP's) appropriate for the preservation of biotic resources. BMP includes methods to prevent off-road recreational vehicles from entering sensitive biotic communities, preservation and enhancement of red-legged frog habitat, and recommended management practices for cattle grazing within critical habitat areas.

Implementation of the above mitigation measure, as a group, would reduce impacts to the County's known critical habitat areas to a level of insignificance. [Responsibility: Santa Clara County]

Impact 2. Incorporation of Rural Lands. The expansion of Urban Service Area (USA) boundaries into unincorporated land would increase degradation of critical habitat areas and sensitive biotic resources as a result of urbanization. There would be direct impacts of development as well as indirect impacts attributable to off-road vehicles and bicycles, domestic animals, ad-hoc trails and introduction of invasive non-native species. If expansion occurs by the City of San Jose into the Northeast Morgan Hill and Santa Teresa resource areas, it has the potential to impact kit fox habitat in the former and serpentine plant and animal species in both locations. Expansion by the City of Morgan Hill, although not likely in the near future, could impact the Northeast Morgan Hill and Southwest Morgan Hill resource area, where serpentine-related plant and animal species are found. Expansion of urban services into the Farman Canyon by the City of Gilroy could impact California tiger salamander habitat. Expansion in this area is likely because it is close to Gilroy's USA. Policy C-GD19(b) calls for establishing UGB boundaries to protect sensitive areas from USAs and assure the preservation of their resource values. Numerous policies of the General Plan relate to this

issue, including C-RC 30, C-RC(i)9, C-GD1, C-GD3 - 6, C-GD - 19 and C-CD9(i) 5. *Removal of sensitive resources within these sensitive areas through urban expansion would be a significant impact.*

Mitigation Measure 1: The cities should refrain from expansion of the USAs into critical habitat areas unless the incorporated land is designated for non-urban uses or dedicated as open space.

Mitigation Measure 2: To be effective, the UGBs policy should be adopted by the cities and County.

Implementation of the above mitigation measures, as a group, would reduce impacts of USA expansion into known critical habitat a level of insignificance.

[Responsibility: Cities of San Jose, Morgan Hill and Gilroy, Santa Clara County and LAFCO]

Impact 3. Resource Management on Public Lands. Population growth in the County would increase recreational uses and/or development of existing public lands for recreational and other purposes. Existing County policies encourage protection of sensitive resources on public lands through careful site planning and limitations on the type and intensity of new recreational uses. The County has adopted a grazing policy for County-owned public lands and is in the process of developing resource management plans for several County Parks (e.g., Upper Stevens Creek, Grant Ranch and Ed Levin County parks). There remains the potential, however, that increased levels of use of existing facilities on other County-owned land would result in significant impacts to sensitive biotic resources in the following resource areas: Alameda Creek (yellow-legged frog habitat), Guadalupe Reservoir Hills (serpentine plant species), Lexington Hills (serpentine plant species), Middle Fork (serpentine plant species), Mt Hamilton (rare plant and animal species), Northeast Morgan Hill (serpentine plant species, rare amphibians, kit fox), San Francisco Bay (bayland wetlands, rare animal species), Santa Teresa Hills (serpentine plant and animal species) and Stevens Creek (sensitive wildlife species). *Impacts to sensitive resources from recreational activities within these areas would to be a significant impact.*

Mitigation Measure 1: The County should develop and implement Resource Management Plans for all public lands under its jurisdiction. The Resource Management Plans should outline measures to preserve sensitive biotic resources such as fencing or enclosure of sensitive areas to recreational use. It should

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identify mitigation for impacts on sensitive resources including but not limited to restoration of habitat removed by trail widening, removal of predatory non-game fish in waterbodies containing sensitive amphibian species and removal of predatory bullfrogs. The County shall establish a monitoring program to assure that impacts have been avoided or mitigated to a less-than-significant level. *Implementation of this mitigation measure would reduce impacts on the publicly-owned critical habitat areas to a level of insignificance.* [Responsibility: Santa Clara County Parks Department].

Impact 4. Riparian Resources. The County has a policy recommending a 100-150 foot-wide setback between riparian resources and new development (R-RC 37). *Implementation of this policy will reduce impacts to riparian resources from new development to a level of insignificance.* If not consistently enforced, or if the width of the buffer zone is reduced for individual development projects (i.e., existing lots of record where setbacks cannot be implemented due to space limitations), significant impacts to riparian resources could occur. Direct impacts could occur if riparian resources are removed for construction of roads or other destructive uses. Impacts to riparian resources would occur if landowners were unaware of restricted activities, and environmentally damaging activities were inadvertently conducted in riparian buffer zones.

The Draft 1994 General Plan proposes that current policies and requirements regarding riparian corridor setbacks be refined as necessary to effect the recommendations of the Open Space Preservation 2020 report of 1987 (see R-RC(i) 10, and OS 2020 report p. III-8, 12a). The Draft 1994 Plan further proposes that cooperative, informational services be developed and provided to the public and to rural landowners, in particular, regarding the value of preserving riparian resources. Implementation Recommendation R-RC(i) 9(b) proposes that the County "Explore the potential for cooperative, educational, non-regulatory measures to inform the public and encourage riparian area conservation." In particular, a "Riparian Values Education Roundtable"

("RIVER" program) might serve to convene interested parties and landowners for information sharing and discussion. *Removal of riparian resources or lack of buffer areas between riparian habitat and development would be a significant impact.*

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- Mitigation Measure 1:** To strengthen the protection of riparian resources, Policy R-RC-37 addressing riparian corridor buffers should be adopted as an ordinance.
- Mitigation Measure 2:** In furtherance of R-RC 23(d), which calls for cooperative conservation planning, a long-term management plan for the protection and enhancement of the riparian systems of Santa Clara County should be developed in cooperation with other agencies (i.e. Santa Clara Valley Water District, California Department of Fish and Game). The adoption of a long-term management plan could provide the basis for inter-agency protection, restoration, enhancement and mitigation banking. Management practices that should be considered by the plan include removal of invasive non-native species, identification of natural riparian areas, and identification of degraded riparian areas appropriate for restoration and enhancement. The County should explore opportunities to obtain grants or other funding for riparian restoration projects, and the use of volunteer groups such as the Urban Creeks Council to carry out the work.

Implementation of the above mitigation measures, as a group, would reduce impacts to the County's riparian resources to a level of insignificance.
[Responsibility: Santa Clara County]

- Impact 5. Screening.** Studies of impacts to riparian resources from domesticated and feral animals has been documented in portions of the County within the Mt. Hamilton Range.¹ Policy R-RC 39 states that the scenic value of riparian areas should be preserved from unsightly aspects of a project by "screening". In the past, this has often been accomplished with walls and fences which in the long-term can reduce the value of riparian areas as migration and movement corridors for wildlife. On the other hand, free access to riparian areas by domesticated and/or feral animal species can result in significant impacts to riparian resources. Impacts include browsing vegetation, compaction of soils within water courses, reduction in water quality and increased potential for erosion and sedimentation. *Whether fencing would have an adverse impact can only be determined on a case-by-case basis.*

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- Mitigation Measure 1:** As a condition of approval, the County should require new development adjacent to riparian areas to be visually compatible with the natural landscape. When necessary, planting of native vegetation to visually screen structures as seen from the riparian area should be required. Tall walls or fences that prohibit the movement of native wildlife to and from riparian resources should be discouraged, except where absolutely necessary to maintain public and private safety.
- Mitigation Measure 2:** The County should establish criteria for screening/fencing that can be applied to various situations with flexibility appropriate to land uses and resources in the vicinity.
- Mitigation Measure 3:** Domesticated animals such as cattle and horses currently have access to creeks and may be causing environmental damage. These activities do not require any permits from the County, so direct mitigation is not possible. The County encourages resource protection through Policy R-RC(i) 9(b) which calls for cooperative educational efforts to preserve resources. This could be extended to fencing or screening of riparian areas.

Examples of measures to reduce fencing impacts to riparian resources include the following: a) installation of fencing along the perimeter of the riparian buffer area that excludes domesticated animals from the riparian area and buffer, yet allows for movement of native wildlife (fence design of four-strand wire fence with top and bottom stands barbless), b) installation of alternative off-stream domesticated animal water sources, and/or c)utilization of grazing for resource management purposes (i.e., managed and timed access to riparian areas as part of a resource management plan).

Implementation of the above mitigation measures, coupled with mitigation measures 1 and 2 for Impact 4, would reduce impacts to the County's

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riparian resources to a level of insignificance.
[Responsibility: Santa Clara County]

Impact 6. Freshwater Habitats. Although Policy R-RC-32 addresses protection of freshwater in general terms, they are focused on creeks and streams. It is unclear whether this and Policy R-RC 31-41 are intended to include other fresh water habitats. Potential impacts include inadvertent damage of red-legged frog habitat, degradation of the aquatic resources, and habitat removal. Possible areas where impacts to sensitive freshwater resources might occur include Chesbro Reservoir (potential impacts to tiger salamander and Edgewood blind harvestman habitat) and Southwest Morgan Hill (tiger salamander and Edgewood blind harvestman). *Potential impacts to freshwater marsh habitats could result from development in the unincorporated area.*

Mitigation Measure 1: Revise Policies R-RC 31-38 to explicitly provide protections to freshwater habitats other than creeks and streams. *Implementation of this mitigation measure would reduce impacts to the County's freshwater resources to a level of insignificance.*
[Responsibility: Santa Clara County]

Impact 7. Degradation of Riparian Areas. Browsing and trampling of riparian vegetation by domestic livestock could impact plants and habitat of spawning and rearing for anadromous fish and breeding areas for sensitive amphibian species. *Grazing could have a significant impact on riparian areas.*

Mitigation Measure 1: Establish a policy to encourage a cooperative effort between the ranchland owners, County, state and federal agencies (i.e., U.S. Soil Conservation Service) to develop Best Management Practices (BMP's) for the reduction of these impacts. *Implementation of this mitigation measure would reduce impacts on the County's sensitive fish and wildlife resources to a level of insignificance.*
[Responsibility: Santa Clara County]

Impact 8. Grasslands. Native grassland habitats within the rural unincorporated area of the County could be adversely affected by overgrazing (i.e., intensive year-round grazing) where there is no field rotation or rest. These impacts may occur within some rural residential areas, but are most likely within Hillside and Ranchland areas. Rare, threatened, endangered or locally unique plant species associated with grasslands would be eliminated, degraded or displaced by these intensive grazing practices. Native plant species may be reduced in numbers, thereby

decreasing overall plant species diversity within the County. Wildlife populations (i.e., deer herds) could decline in certain regions due to lack of forage thereby contributing to an overall decrease in the diversity of wildlife resources in the County. If grazing lands are managed with only seasonal grazing and there is adequate field rotation and rest, impacts to sensitive botanical resources and wildlife populations would be significantly reduced. *A substantial decrease in the overall level of plant and animal diversity within the County is a significant impact.*

Mitigation Measure 1: Through an educational and cooperative program, encourage implementation of measures that improve the habitat values of grasslands. Recommended management practices include prescribed burn programs (called for in Policy R-HS 33 of the Draft General Plan), rotation of grazing lands, grassland mowing programs, invasive non-native plant species eradication programs, and conservation of downed wood for wildlife cover. *Implementation of the above mitigation measures could reduce impacts to grasslands to a level of insignificance.* [Responsibility: Santa Clara County]

Impact 9. Firewood Collecting. Firewood collection that includes complete removal of dead or downed trees can result in significant impacts to wildlife habitat. Removal of snags (a dead standing tree) and downed trees is not beneficial to wildlife. Snags and downed wood offer an abundance of perching, roosting, and burrowing sites, as well as cavities for nesting. Insects are attracted to the decaying wood, providing forage for many wildlife species. Snags and downed wood concentrate these resources, providing more complex overall habitats, and are heavily used by wildlife. *There is no indication that this is a significant impact in the County at this time.*

Recommendation: Supplemental to public information and education efforts recommended in the Draft General Plan, the County should provide private landowners with suggestions for developing a wildlife-compatible firewood harvesting plan, such as are available in USDA publications. *Implementation of this mitigation measure would help reduce the impacts of firewood collection.* [Responsibility: Santa Clara County]

Impact 10. Fire Suppression. Future development in rural unincorporated areas would result in an increased level of fire suppression overtime, thereby impacting sensitive plant communities, rare, threatened or endangered species, or

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ethnobotanical resources dependant on fire for their long-term viability and regeneration. Fire suppression could cause a substantial decline in plant and animal diversity within the County. *Proposed policy R-HS 33 encourages controlled burns and other forms of fuel management. With implementation of this policy, no significant impacts should occur.*

Mitigation Measure: No further mitigation is required.

Endnotes to Biotic Resources Chapter

1. Joseph D. Grant and Ed Levin County, *Parks Resource Management Plan, Baseline Report*, Brady and Associates, 1994; Henry W. Coe State Park General Plan, California Department of Park and Recreation, 1985; *Influence of Forest and Rangeland management on Anadromous Fish habitat in Western North America: Effects of Livestock Grazing*, U.S. Department of Agriculture Pacific Northwest Forest and Range Experiment Station, Technical Report PNW-124, 1981.

CHAPTER 5D TRANSPORTATION

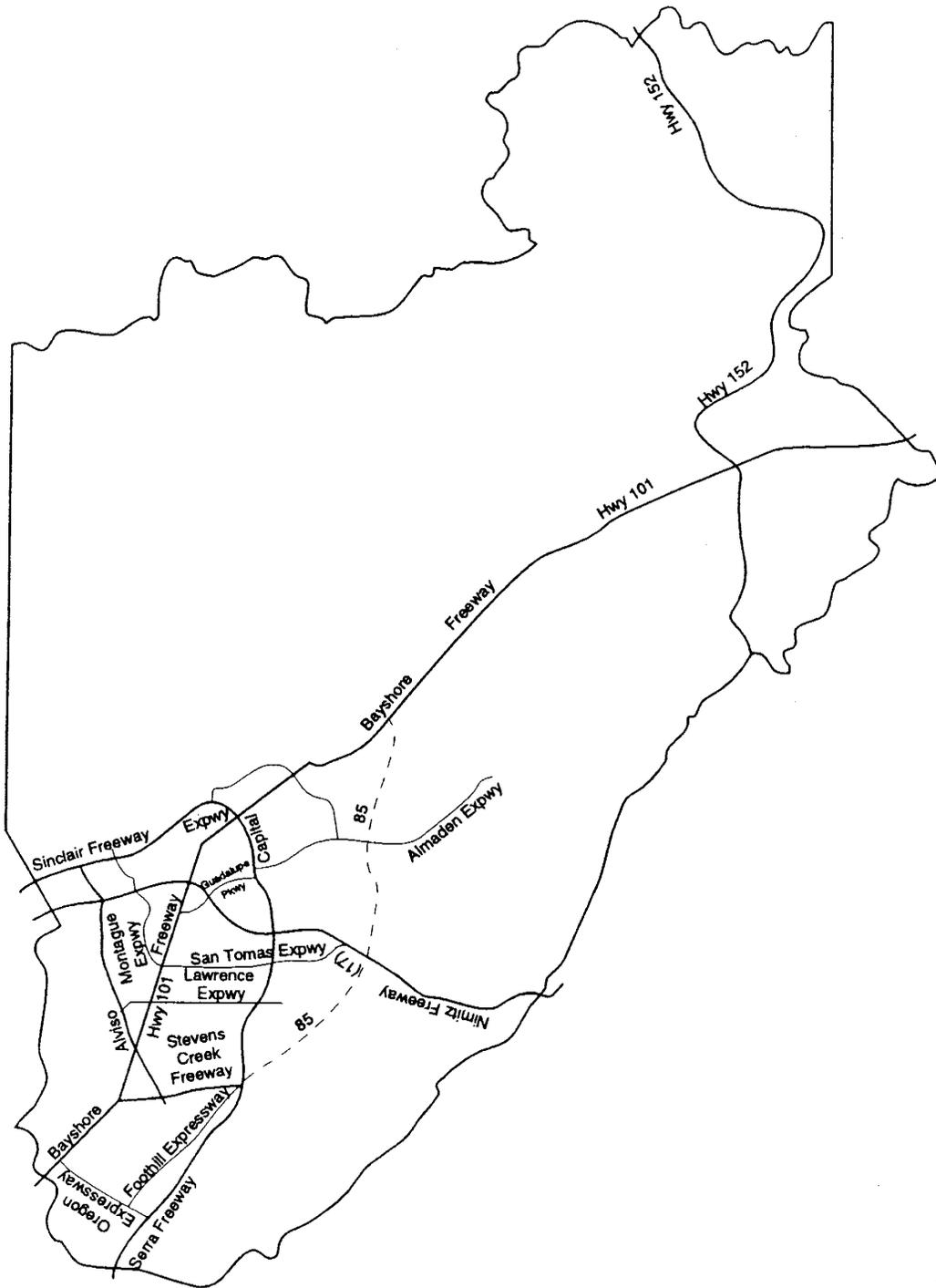
Environmental Setting

This section of the EIR describes the transportation system of Santa Clara County. It involves a discussion of existing circulation regarding roads, commuter lanes, transit, paratransit, bicycle and pedestrian facilities, and airports. It then discusses these components of the transportation system in the context of the T2010 Plan, which is the most comprehensive transportation plan for the County. That discussion is followed by a presentation of the Transportation Element of the County Draft 1994 General Plan, with emphasis on the policies for the rural unincorporated area. As transportation policies of the Draft 1994 General Plan are consistent with and complement the T2010 Plan, policies common to both documents are not repeated. Rather, Draft 1994 General Plan strategies that focus on specific concerns for the rural unincorporated area are presented. The specific policies and implementation measures associated with the strategies can be found in the General Plan itself.

Existing Highway System and Funded Improvements

Santa Clara County is served by an extensive freeway/highway system, as shown in Figure 5D-1. Most of the freeways are in the incorporated area or their USA's. The main components of this system are Interstates 280, 680, and 880; and State Highways 101, 17, 85, 87, 152 and 237. There expressways interconnecting virtually all of the North County. The main routes in South County are 101, 152, Monterey Road and Santa Teresa Boulevard. Extensive study of the freeway system in the T2010 planning process indicates that congestion has been a fact of life for a long time and will continue to be in the near future. For example, in 1990, 70 directional¹ miles of freeways in the County were reported by the Metropolitan Transportation Commission (MTC) to be operating a speeds of 30 mph or less during the AM peak hour. The number of trips taken through Santa Clara County will increase by 11% between 1995 and 2010. By 2010, there will be 5 million trips per day on the County's road network. Traffic volumes on I-880 and I-680 presently exceed theoretical capacity at the County line during most peak hours, and other freeways are approaching this level of saturated use. Figure 5D-2 shows the peak hour volumes and capacity on major freeways in Santa Clara County. Another portrayal is shown on a map in Figure 5D-3. Here, the congestion is defined as freeways and expressways operating at less than 35 miles per hour for 15 minutes or more. The data is for 1985 and 1989. Virtually all of the congestion and delays are in the incorporated areas and their USAs.

Figure 5D-1 Santa Clara County Highway / Freeway System

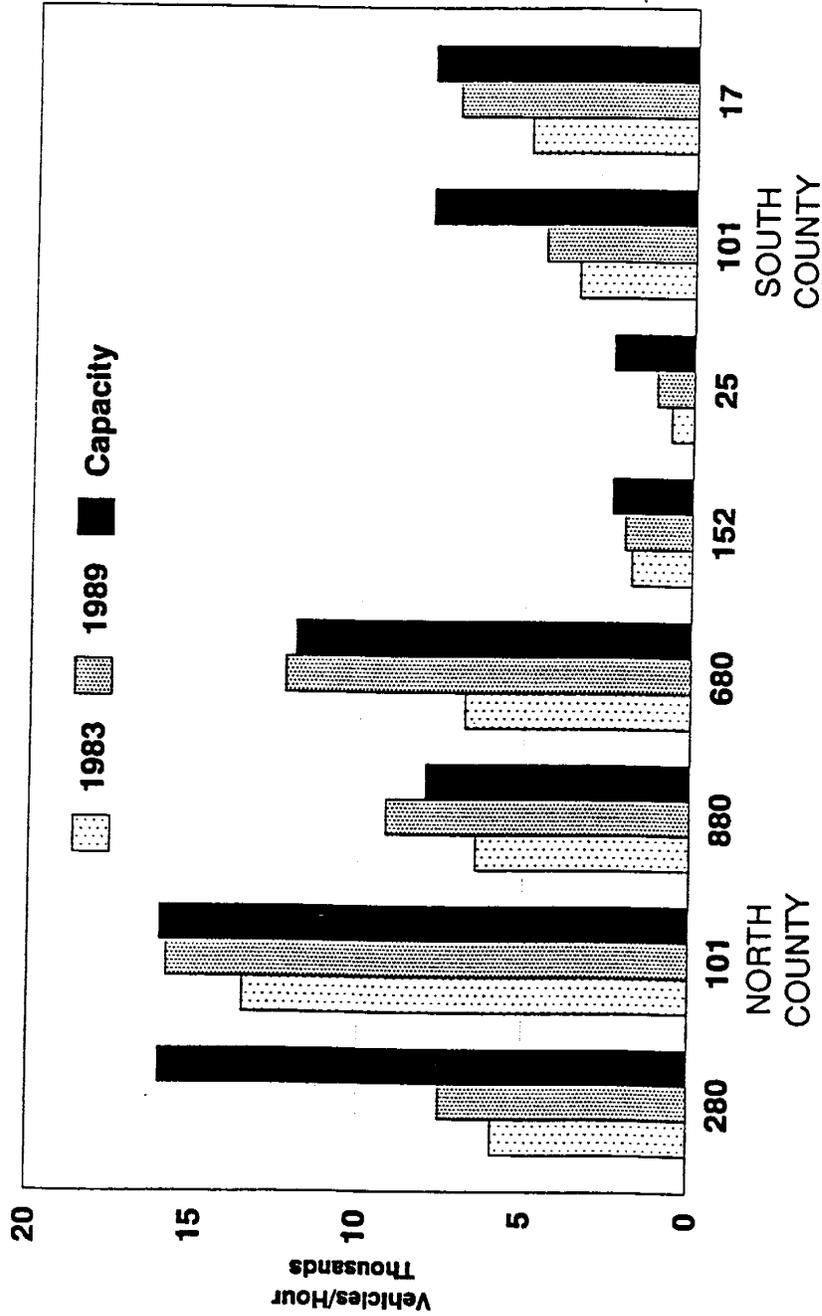


NO SCALE
 NORTH

Sources: Santa Clara County Planning Office

Planning Analysis & Development

Figure 5D-2 Peak Hour Volume vs. Capacity Major Freeways into Santa Clara



Measured at Santa Clara County Line



Sources: Caltrans Traffic Volumes on California State Highways 1983 and 1989

Planning Analysis & Development

Santa Clara County Draft 1994 General Plan EIR

To address the congestion problem, a number of improvement projects were identified, including those funded under Measure A, a voter-approved half-cent sales tax increase first passed in 1984 and continued by voter affirmation in 1992. These planned projects are listed in Table 5D-1 and illustrated in Figure 5D-4. They include a new freeway (Route 85), freeway widenings, new interchanges, expanding the light rail system, upgrading CalTrain service and addition 30 super express buses to connect neighborhoods with major employment centers. Most of these projects are in the incorporated areas and their USAs. It should be noted that some Measure A projects have been halted pending the resolution of litigation which is expected by the end of 1994.

Commuter Lanes

To better manage commute traffic, Santa Clara County has established a commuter lane program. This program consists of high occupancy vehicle (HOV) lanes as well as express bus service, park-and-ride lots and ramp meter bypass lanes. Table 5D-2 lists existing commuter lane projects in the County. Figure 5D-5 shows the location of completed lanes, those under construction and those planned as of 1992. Most of these projects are in the incorporated areas of the County and their USAs. These lanes are restricted to use by vehicles carrying two or more people in commute hours.

Park-and-Ride Lots provide opportunities for commuters to park their vehicles all day for free and ride a bus, light rail, train, or carpool to work. There are approximately 42 park-and-ride lots with 8,500 spaces currently available for use, including those opened in conjunction with the Guadalupe Light Rail Transit (LRT) line.

High Occupancy Vehicle (HOV) Ramp Meter Bypass Lanes allow for faster freeway entrances. A bypass lane permits HOV lane users to proceed non-stop onto lanes at as many metered on-ramps as possible. Situations which may constrain the addition of HOV bypass lanes include lack of right-of-way and certain geometric designs.

Existing Transit System and Funded Improvements

The Santa Clara County Transit District (SCCTD) has provided bus service in the County since 1973. From 1973 to 1991, ridership increased from about 7 million total annual passenger trips to approximately 41.6 million total annual passengers. In this period, the active fleet size grew from 78 to 512 buses running on 80 regular routes and 19 express routes serving 114,000 passengers per day and 41.6 million per year. The number of vehicles in peak service has increased from 389 in 1983 to 420 in 1991. Figure 5D-6 shows annual bus ridership. The current intra-County rail system consists of 20 miles of Light Rail Transit (LRT) which runs between Great America in Santa Clara to Santa Teresa in south San Jose.

**Table 5D-1
Existing and Funded Transportation Improvement Projects**

Highway Projects

***Route 85:** Construct a new 18 mile long, 6-lane freeway (with HOV lanes) between Stevens Creek Boulevard/Route 280 in Cupertino and Route 101 South San Jose.

***Route 87:** Convert existing expressway to 6-Lane freeway (with HOV lanes) from Coleman to Route 101.

Route 101: Widen to 8 lanes (including HOV lanes) between Route 280 and Route 87, in San Jose; Lawrence Expressway interchange.

Route 101/880: Initial project for 101 widening.

***Route 237:** Convert to a 6-lane freeway between Route 880 in San Jose and Mathilda Avenue in Sunnyvale.

Route 237: Construct a new interchange at Maude/Middlefield in Sunnyvale.

Route 880: Widen to 6 lanes (with HOV lanes) from Route 101 to Montague; Widen to 6 lanes from Montague to the Alameda County line.

Route 17: Construct a new interchange at Lexington Reservoir.

Transit Projects

Light Rail: Complete the 21-mile Guadalupe Light Rail System into south San Jose (Completed).

Caltrain: Completed the extension to the Tamien Station.

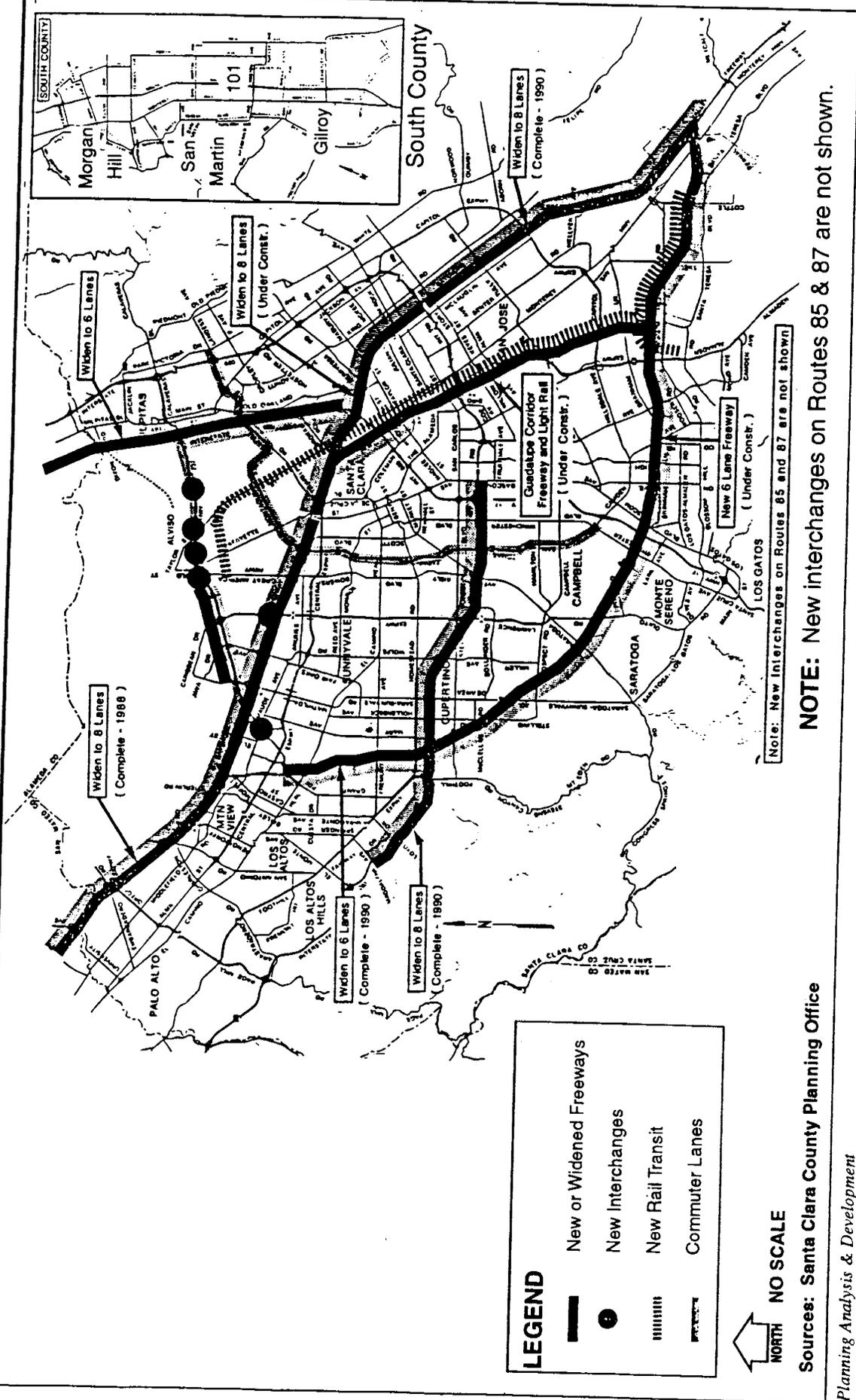
Buses: Enlarge bus fleet by 20 vehicles, with an average of 432 buses in peak period service. (not accomplished: service decreased by 10%.)

Table Notes:

* Funding depends on the resolution of Measure A litigation, according to Roy Molseed, Environmental Analyst, Santa Clara County Transportation Agency, May 1994.

Source: T2010 Transportation Plan, EIR, pg. 13.

Figure 5D-4 Map of Existing and Funded Transportation Improvement Projects

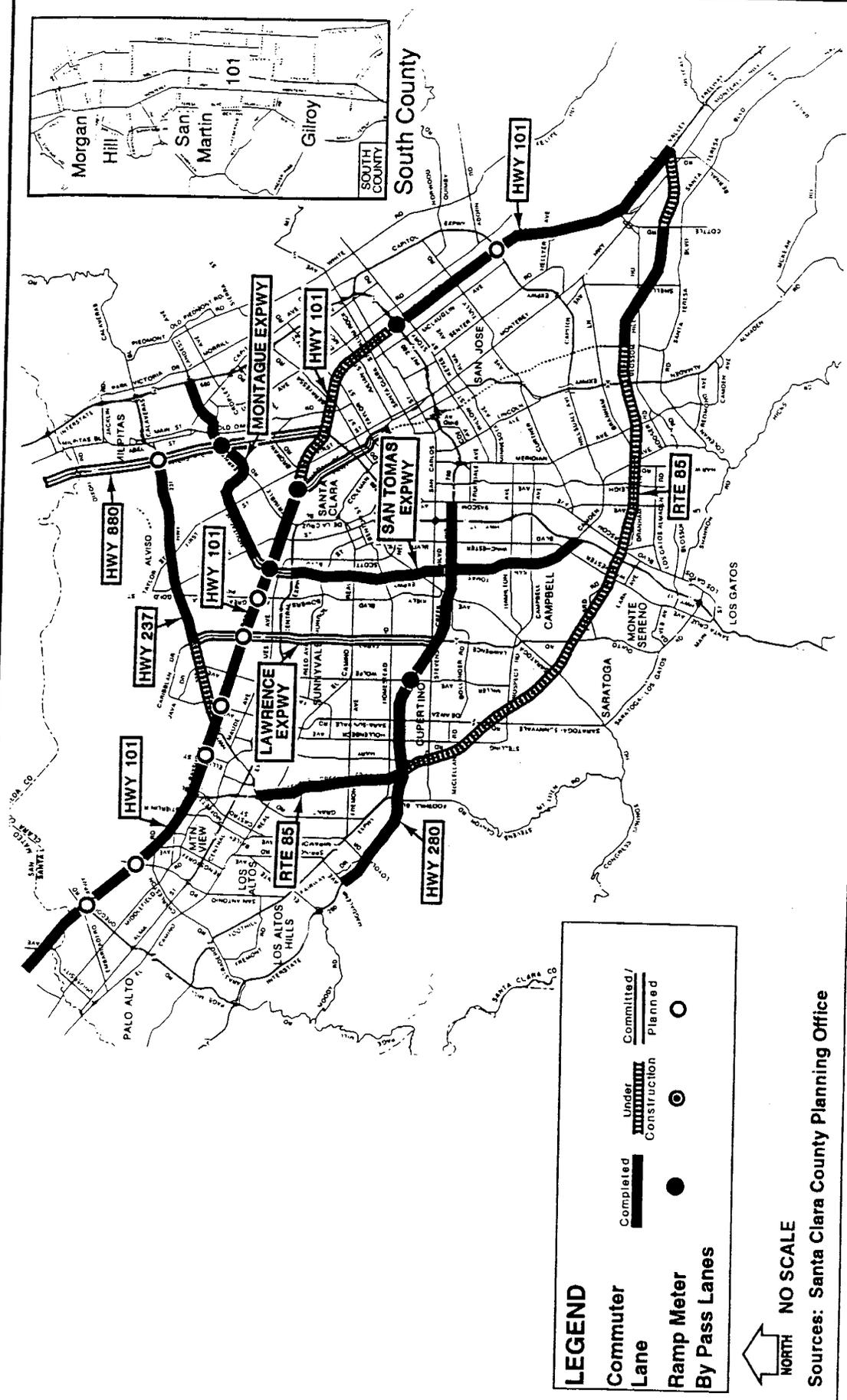


**TABLE 5D-2
Existing Commuter Lane Projects**

Project			
Prior 1987	Project Miles	Lane Miles	Open
San Tomas Expressway (Route 17 to Route 101)	8.0	16.0	1982
Montague Expressway (Route 101 to I-680)	6.0	12.0	1983
Route 237 (I-880 to Lawrence)	4.5	9.0	1984
U.S. 101 (Lawrence to Guadalupe)	4.0	8.0	1986
Post 1987			
U.S. 101 (Lawrence to San Mateo County)	8.6	17.2	1988
U.S. 101 (I-280 to Bernal)	8.5	17.0	1990
Highway 85 (I-280 to Route 237)	4.0	8.0	1990
I-280 (Magdalena to Bascom)	10.0	20.0	1990
Highway 85 (Route 87 to Cottle)	4.0	8.0	1991
Total in Operation:	57.6	115.2	

Source: T2010 Final Plan, pg. 54

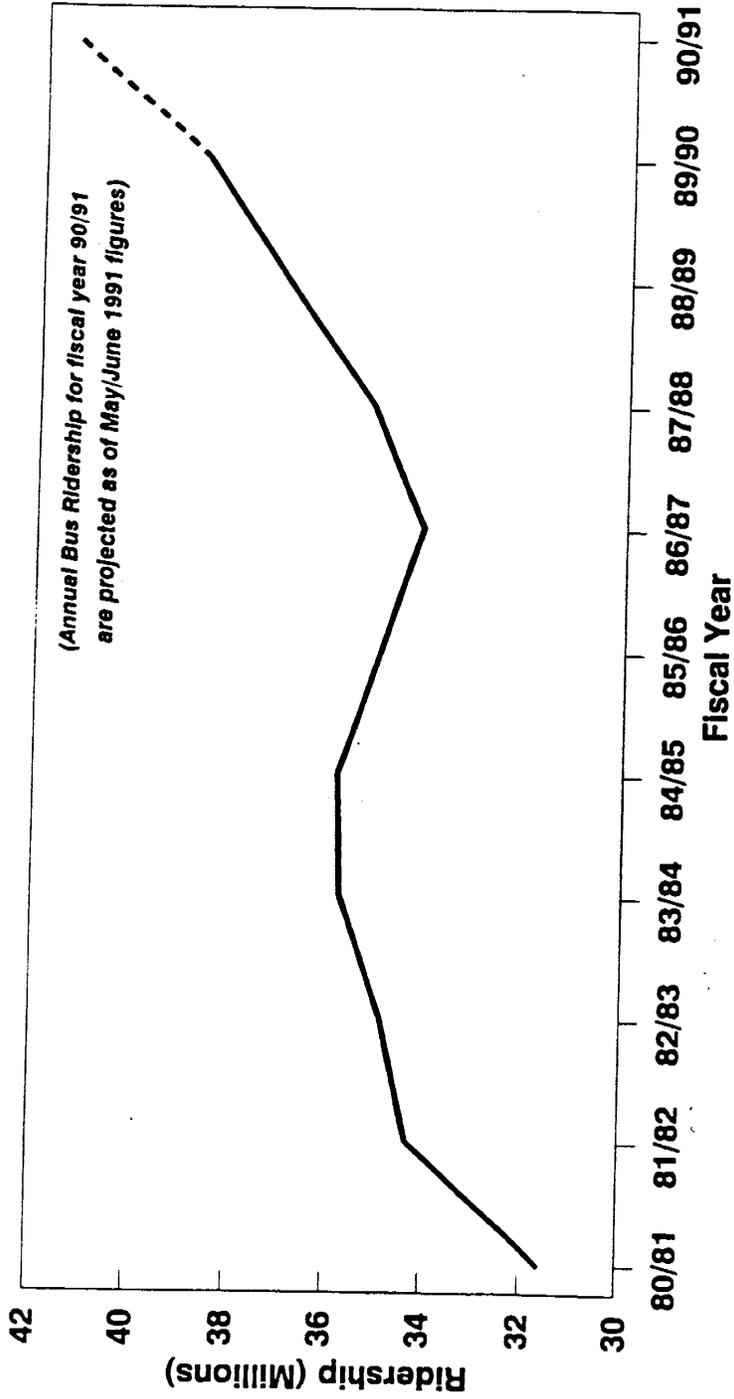
Figure 5D-5 Map of Commuter Lane Project



Sources: Santa Clara County Planning Office

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Figure 5D-6 Annual Bus Ridership (Fiscal Year 1980 - 1991)



↑ NORTH
NO SCALE

Sources: Santa Clara County Planning Office

(All figures from Santa Clara County Transportation Agency Transit Fact Sheets)

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There are currently 33 stations. Tamien Station serves as a multi-modal facility linking CalTrain, the LRT and the bus system. At least 2.5 million passengers are riding the LRT today.² CalTrain provides passenger rail service between Gilroy and San Francisco. Four trains operate between San Jose and Gilroy. In all, CalTrain carries 33,000 passengers throughout the line per day and is expected to carry 39,000 per day by 2010.

Paratransit

Paratransit services are typically door-to-door services for people who are unable to use conventional fixed-route transit. MTC estimates that there were over 52,000 transit-disabled people in Santa Clara County in 1990, which represents 3.5% of the County population. According to the T2010 Plan by 2010, this number is expected to increase to 88,000 or 5% of the County population. According to the Americans with Disabilities Act (ADA), the County must develop a paratransit system that serves this population. Currently, all LRT vehicles and stations and bus service are accessible to the disabled. There are five paratransit service providers in the County who together provide 300,000 trips per year.

Bicycle and Pedestrian Facilities

Bicycle Facilities: Bicycle use and pedestrian facilities provide alternatives to the use of private automobiles and support the use of transit. Cyclists constitute 1.5% of the commuters in Santa Clara County, only slightly less than the number carried on transit. As of May 1988, bicycles were allowed on light rail transit. In November 1990, the Board of Supervisors approved a policy to allow bicycles on board all County buses when passenger loads permit, and add bicycle racks to buses where heavy ridership precluded bringing bicycles on board. One bus route is currently equipped with racks. Caltrain allows folding or collapsible bicycles on board. It is County policy that bicycles be accommodated whenever a new travel corridor is provided. The following are plans to accommodate bicycles in the Route 85, 87, and 237 corridors:

- Caltrans has made plans to construct a bicycle path on the east side of Route 87, partly on a separated path and partly on parallel streets. Portions of the project have been funded.
- Caltrans has developed a plan to construct a series of alternate bike routes and crossings to accommodate bicycle travel because upgrading Route 237 to a full freeway and the Route 85 extension will prohibit bicycles. Bicycle over- and undercrossings have been fully funded; however, the remaining portion of the plan is not funded.

The Santa Clara County Transportation Agency is committed to accommodating all modes of traffic on County expressways, subject to safety considerations and fiscal constraints. The Agency has developed expressway standards that provide minimum adequate width for bicycling.

Pedestrian Facilities: The Transportation Element of the County's 1980 General Plan and the Draft 1994 General Plan contains a policy [C-TR 34] which states that walking shall be encouraged and facilitated as an energy conserving, non-polluting alternative to automobile travel.

Walking trips can be used for work, school, personal business, and recreation. Walking is necessary to support other commute alternatives such as transit and ridesharing. The extent to which people walk depends on both pedestrian facilities and land use characteristics. Adequate pedestrian facilities along with a mix of land uses make walking convenient from rideshare/transit drop-off points to worksites and for short midday trips.

A key pedestrian concern is the provision of pedestrian facilities along County expressways. On August 21, 1991, the Board of Supervisors adopted a policy to encourage the development of sidewalks/paths in the following situations:

- Between bus stops and the adjacent public street intersections and property developments.
- Expressway crossings of barriers (freeways, rivers, and railroads)
- Special locations identified by public agencies, community groups, etc.

The T2010 Transportation Plan

The T2010 Plan is the transportation plan for Santa Clara County. It recognizes the need to respond to severe transportation problems in the County. Growth and development has and continues to cause substantial traffic congestion. In 1985, freeway congestion resulted in 15,000 hours lost daily, compared to 7,000 in 1980.³ Future traffic increases are expected due to population growth throughout the County, but especially in South County. Job growth is expected to increase employment density, especially in the Golden Triangle (formed by US 101, I-880 and State Route 237) and downtown San Jose.

Transportation Legislation

- **AB 3705** passed in 1988 required preparation of Countywide transportation plans by the nine counties in the Bay Area. The law intends that these plans provide an opportunity for systematic transportation planning, that they be multi-model, multi-jurisdictional and that they encompass the impact on land use of current transportation facilities and future transportation investments. The Countywide plans are incorporated into the Regional Transportation Plan (RTP) prepared by the Metropolitan Transportation Commission (MTC).
- **AB 471 and Proposition 111** (June 1990) require the urban counties of the state to adopt Congestion Management Programs (CMPs) in order to receive funds for financing transportation improvements that were established by Proposition 111. MTC encourages the counties to coordinate the preparation of the two and to integrate their CMPs into the short-term priorities for transportation improvements within the County. *Continued.*

Transportation problems will be exacerbated by commuters from outside the County who will not be able to find affordable housing near job centers.

The basic goals, elements and direction of the T2010 Plan include freeway and highway improvements; transportation strategies beyond highways; creation of a comprehensive and balanced plan that addresses supply and demand; and integrated land use policies and growth management. It includes baseline transportation projects and projects to be completed by 10 and 20 years. The T2010 Plan integrates new legislation, reviews priorities for rail corridor development, provides a Long Range Rail Master Plan, and formulates a new strategic implementation plan that integrates financing strategies.

There have been three important legislative actions taken in recent years that have had significant influence on the work of preparing the Preliminary T2010 Plan. This legislation has spawned a series of programs and requirements that must be incorporated into the County's transportation planning efforts and will have various effects on the shaping of transportation policies and the scope and timing of implementation efforts over the next decade, at least. Key legislation calling for comprehensive transportation planning is summarized in the sidebar above and to the right.

The T2010 Plan includes a Policy Element that identifies goals, objectives and policy recommendations that have regional, Countywide and local relevance. These are presented in the Transportation Appendix. The policies address highways, commuting, transit, land use and financing. The land use policies are consistent with those of the 1994 Draft General Plan. In particular, they include a call for joint city and County land use and transit planning. They seek to ensure the effectiveness of the recommended transportation improvements, encourage the use of commute alternatives, and bring the growth of jobs and housing into better balance with the capacity of the transportation system.

The Draft 1994 General Plan includes the following strategies for the rural unincorporated area.

- Strategy 1: Anticipate and plan for future transportation demands.*
- Strategy 2: Provide for non-motorized circulation in rural residential communities.*
- Strategy 3: Facilitate use of commute alternatives.*
- Strategy 4: Assure maintenance and safety of rural roads.*
- Strategy 5: Preserve and enhance scenic qualities and natural resources adjacent to County roadways.*
- Strategy 6: Anticipate future airport need and impacts.*

The specific policies that would further these strategies can be found in the Draft 1994 General Plan within "Transportation: Rural Unincorporated Area Issues and Policies". Supplementing the policies are implementation recommendations.

The transportation policies address commute alternatives, coordination of transportation planning with cities, scenic and natural resource preservation and airports. They focus on non-urban systems and note that most rural roadways in the unincorporated area are functioning acceptably, but some are carrying a considerable amount of traffic from incorporated areas. This results in higher volumes than the roads were designed to take.

The transportation implementation recommendations of the Draft 1994 General Plan call for a comprehensive Rural Unincorporated Transportation Plan. It would consolidate applicable existing ordinances, standards, plans and studies.

The Countywide transportation policies of the Draft 1994 General Plan complement the goals, objective and policies of the T2010 Plan. The update's transportation strategies including the following:

- Strategy 1: Develop urban land use patterns that support travel alternatives.*
- Strategy 2: Manage travel demand, system efficiency and congestion.*
- Strategy 3: Expand system capacity and improve system integration.*
- Strategy 4: Support new transportation technologies.*

Single Occupant Automobile Alternatives

- Improve facilities to make bicycle and pedestrian travel more safe, direct, convenient, and pleasant for commuting and other trips to activity centers and to support the use of other commute alternatives.
 - Ensure adequate width for lane sharing (or shoulders) for motor and bicycle traffic into all road/highway design work.
 - Construct related bicycle facilities concurrently with highway improvements.
 - Integrate bicycle and pedestrian programs and policies into land use and transportation planning.
 - Pursue all available funding options for bicycle and pedestrian facility improvements.
 - Expanding bicycle carrying capabilities for buses and rail systems.
 - Requiring that cities and counties have comprehensive bicycle plans and bicycle advisory committees to receive State Transportation Development ACT (TDA) Article 3 funds; and the new Article 3 funding requirements will become effective in 1992.
-

These strategies are supported with specific policies and implementation plans. The side bar above describes alternatives to the use of single occupancy vehicles, with emphasis on bicycles and pedestrian opportunities to implement the travel demand strategy of the 1994 Draft General Plan.

Policies and Regulations

A. Plan Policies that Foster Environmental Protection

Policies from the 1980 General Plan

- a. An adequate transportation system is considered essential for improving overall quality of life for County residents and businesses, including enhanced environmental quality. Policy [C-TR 2 (b)].
- b. The County's transportation system should be balanced, well-integrated, and capable of meeting projected demand. Policy [C-TR 1].
- c. Integrate transportation planning consistent with the goals of Countywide, comprehensive planning regarding urban growth management, environmental quality, and economic well-being. Policy [C-TR 4].
- d. Reduce commute distances and automobile-dependency through better proximity of jobs and housing, pedestrian and bicycle facilities, and other means. Policy [C-TR 6].
- e. Emphasize travel demand management techniques, system integration, and congestion management rather than increasing system capacity. Policies [C-TR 9 - 14].
- f. The goal of transportation planning and related growth management policies is to maintain a level-of-service no lower than D for major thoroughfares. Policy [C-TR 12].
- g. Increase the physical capacity of the system as necessary to complete planned corridors for transit and roads, and increase facilities for alternative modes. Give highest funding priority for intra-County circulation needs. Policies [C-TR 15 - 19].
- h. Improve integration of local, County, and regional transportation facilities. Policies [C-TR 1 & 17].
- i. Encourage bicycle and pedestrian alternatives through adequate route planning, facilities, and funding. Policies [C-TR 34 - 37].

Substantive Policy Changes in Draft 1994 General Plan

- a. Enhance the effectiveness of transportation infrastructure investment through coordination and consistency of local land use plans, specific plans, and redevelopment plans with transit planning. Policy [C-TR 5].
- b. Emphasize land use, density patterns, mixed use and compact development that support travel alternatives, especially along planned transportation and transit corridors and urban activity centers. Policy [C-TR 7].
- c. Develop transit-oriented urban design and site development standards to facilitate access to transit, bike and pedestrian facilities. Policy [C-TR 8].
- d. Develop an integrated system of rail transit service in accordance with the long range Rail Master Plan of the "T-2010 Plan." Policies [C-TR 20 - 24].
- e. Improve and coordinate para-transit services. Policies [C-TR 18 & 28].
- f. Make increased use of telecommuting. Policy [C-TR 43].
- g. Support emerging advanced technologies to meet future travel demand and reduce congestion impacts. Policy [C-TR 42].
- h. Coordinate rural unincorporated area land use and transportation planning to meet long term circulation needs of rural area residents. Policy [R-TR 1].
- i. Provide for non-motorized circulation needs of the rural area. Policy [R-TR 6].
- j. Facilitate commute/travel alternatives for rural residents destined for urban employment areas or other urban locations. Policy [R-TR 7].
- k. Ensure rural road safety taking into account environmental standards; the impacts of rural development on road safety or other infrastructure conditions should be mitigated. Policies [R-TR 9 through 11].
- l. Maintain scenic highway qualities and mitigate impacts of rural road expansion/construction activity. Policy [R-TR 14].
- m. Assure that new ancillary airport land uses can be appropriately located. Policy [R-TR 16].

- n. New or expanded rural airports should be located where compatible with surrounding land uses. Policy [R-TR 15].

B. Ordinances, Regulations that Reduce Impacts

- 1. Parking Space Requirements of the County establish standards to avoid or lessen congestion in the public streets by requiring adequate off-street parking consistent with the type of land use.
- 2. County Land Development Regulations: Subdivision and Single Building Site Ordinances (Sections C12-53 & C12-55) include requirements for review and conditioning of projects for compliance with Official Plan Lines and off-street parking standards as well as adequacy of street improvements and traffic circulation plans.
- 3. Official Plan Lines provide for the systematic execution of the Circulation Element of the General Plan by designating the precise location of rights-of-way and limiting the location of buildings and other improvements with respect to planned rights-of-way. Official maps showing the planned rights-of-way have been adopted by the Board of Supervisors and are the basis for road dedication required for projects approved by the County.
- 4. Zoning Ordinance: Section 47-5(d) Use Permit findings require that safe access (including access for fire and emergency vehicles), adequate off-street parking and loading/unloading areas be provided; and that the proposed use shall not cause traffic congestion that adversely affects the surrounding area.

C. Significance Criteria

CEQA, Appendix G (I) describes a significant transportation effect as one that causes an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system. In addition to this standard, this EIR considers an impact insignificant if it will result in human exposure to unsafe or hazardous conditions and there is no program to eliminate the hazards.

Impacts and Mitigations

- Impact 1. Non-motorized Circulation:** There are many locations in the rural unincorporated area in which people travel by non-motorized means such as walking, bicycling, and horseback riding. Some areas do not have adequate sidewalks or paths that separate people using these different modes from motor vehicle traffic. This is particularly true of San Martin and other Rural Residential areas where almost half of the growth under the Plan is anticipated.

Consequently, future residents of these areas could face hazardous conditions that either place them in danger or dissuade them from using such means of travel. The Draft General Plan includes a policy [R-TR 6] that calls for pathways to provide safe non-motorized routes and three implementation recommendations to bring this about, [R-TR(i) 6 through 8]. The implementation recommendations identify areas in which to develop non-motorized circulation plans, prepare such plans and require development projects to provide for non-motorized circulation. There is no program or funding to provide these facilities for existing residences. Lack of adequate facilities can cause a significant impact with respect to safety and increased use of automobiles. *Plan policies would reduce the impacts to a level of insignificance provided all critical areas are addressed and a non-motorized circulation plan is implemented.*

Mitigation Measure : No further mitigation is required.

Impact 2. Traffic Volumes. The projected growth in the rural unincorporated area that is subject to the discretionary approval by the County consists of 400 new subdivided parcels, (most of which are expected to develop with one residential unit) and 137 non-residential uses. The residential units are projected to generate 10 vehicles trips per day or 4,000 trips per day by the end of the 15-year life of the Draft General Plan. The 400 residential units would be developed at an average rate of 27 units per year, and when fully built, would generate an increase of 270 trips per year. These trips will be distributed throughout the rural area.

No increase in vehicle trips are projected for the non-residential development because these projects are expected to serve the local community; therefore, their trips are already counted in residential trips. The ABAG employment projections for the rural unincorporated area project a decline of 180 jobs by the year 2010, further supporting the assumption that non-residential development would not be a net new generator of vehicles trips.

The gradual increase in vehicle trips due to the Plan would be spread across the road system of the rural unincorporated area. *Consequently, this is not expected to be a significant impact on the rural roadway system.*

Mitigation Measure: No further mitigation is required.

Impact 3. Large Vehicles. Motor homes, recreational vehicles and trucks are larger and heavier than most rural roads were designed to carry on a regular basis. The Draft 1994 General Plan anticipates increases in this type of traffic attributable

to projected growth in the County and from external sources. The Draft 1994 General Plan Policies R-RT 9 through R-RT 12 are aimed at improving the quality of substandard roads, but do not directly address large vehicles. *Large vehicles would have an increased and significant impact on rural roads.*

Mitigation Measure 1: The County should use signage to detour heavy vehicles from roads that are not designed to carrying them and channel this traffic to appropriate routes. *If successful, this measure would reduce the impact to a level of insignificance.*
[Responsibility: Transportation Agency and County Planning Department]

Impact 4. Substandard Roads. Most unincorporated areas developed in a piecemeal fashion. Consequently, the road system serving them is sometimes incomplete and/or inadequate, with roads not yet up to current standards and creating confusing inefficient circulation patterns. Such a circulation system is inconvenient to use and can pose safety hazards. It can also foster inappropriate land use patterns if the roadways are configured haphazardly. Policies R-RT 1-4 address transportation planning and coordination with city transportation planning. Implementation recommendations R-RT(i) 1-5 address monitoring the rural roadway system, right-of-way acquisitions and conditions to be placed on new subdivisions intended for annexation so that they comply with city circulation plans. Policies R-TR 9 through 12 also address this issue. The Draft 1994 General Plan includes three implementation recommendations R-RT(i) 12, 13 and 14] oriented toward improving and maintaining roads to standards appropriate for rural areas. R-RT(i) 12 calls for appropriate standards to evaluate roadways proposed for construction. R-RT(i) 13 calls for roadway standards to be revised regularly to reflect current road conditions and vehicle fleet composition. R-RT(i) 14 calls for monitoring and assessing existing County roads to create a regularly updated repair list. The array of policies noted above would continue to address the problem of substandard roads in a piecemeal fashion. With the lack of a capital improvement plan, it is uncertain that the implementation of individual polices and recommendations in the Draft 1994 General Plan would reduce the impact to a level of insignificance. The repairs are the responsibility of the County Transportation Agency. *Substandard roads and road patterns can cause significant safety impacts.*

Mitigation Measure 1: The County should undertake a comprehensive transportation plan that consolidates all of the policies and recommendations of the Draft 1994

General Plan. When implementing the transportation policies, the County, in consultation with the Transportation Agency, should establish a definite date by which to undertake and complete an assessment of current rural roadway conditions and travel demand as a preliminary step to a comprehensive plan for rural area transportation as called for in (R-TR(i) 1. The transportation plan should include consolidating numerous existing transportation planning documents into a single formal transportation plan for the rural unincorporated area. The transportation plan should identify impacted locations and measures to avoid or reduce them prior to approval of any new projects that would exacerbate already impacted roads. Detailed circulation plans should be developed where necessary focusing on solutions to the existing and probable future problem areas. The solutions should be integrated into the transportation plan and capital improvement program. The County should prioritize the improvements and allocate resources to make them. *Implementation of such a plan would begin the process of reducing the impacts. Actual improvements would reduce the impact to a level of insignificance.* [Responsibility: Transportation Agency and County Planning Department]

Mitigation Measure 2:

Individual future development projects should be evaluated for their potential to exacerbate substandard road conditions and be required to contribute their fair share of improvement costs to improve these conditions, as identified in the transportation plan. *This measure would help mitigate the impacts attributable to new development.* However, piecemeal improvements carried out on a project-by-project basis cannot solve the problem of substandard roadways. The impacts of new development cannot be fully mitigated without addressing existing conditions as part of the overall solution. [Responsibility:

County Transportation Agency and County Planning Department]

Mitigation Measure 3: The County should investigate funding sources to address existing roadway improvements that cannot be funded through impact fees on new projects. *Until this is done, there would be an unmitigated adverse impact.* (Responsibility: County Transportation Agency)

Impact 5. Environmental Consequences of Rural Road Improvements. Improving rural roads for purposes of safety, accommodating more traffic and larger trucks, and improving inefficient circulation patterns can result in roads that are incompatible with the character of the rural unincorporated areas. Widening rights-of-way, straightening and properly banking roads and adding shoulders could cause substantial environmental impacts of their own. For example, widening and grading can cause erosion; loss of vegetative cover; damage to streams, fish and wildlife; and aesthetic impacts. Even more traffic could be attracted to use the roads, increasing runoff that causes urban pollutants. Policy R-TR 14 specifically requires that the environmental impacts of roadway construction and expansion be reduced to a level of insignificance. Implementation Policy R-TR (i) 17 requires impacts to be reduced to a level of insignificance. *Although plan policies emphasize mitigation of all impacts of road construction to a level of insignificance, in reality this may not be possible to accomplish. Roadway improvements can have significant impacts on the environment that may be beyond feasible mitigation.*

Mitigation Measure 1: If the County implements the Draft 1994 General Plan policies cited above, they would help reduce the impacts of road construction. However, there are likely to be impacts that cannot be feasibly mitigated. *This can only be determined after the required environmental review of these improvement projects.* [Responsibility: Transportation Agency and County Planning Department]

Impact 6. Agricultural and Urban Traffic Conflicts: Vehicles and livestock associated with agriculture are slow-moving users of rural roads that often come in conflict with faster-moving through-traffic in the rural areas of the County. The growth permitted under the Plan will increase these conflicts. Depending on the amount

of traffic, road conditions and local land uses, *these conflicts can result in significant safety impacts and harm to animals.*

Mitigation Measure 1: Where feasible, design and/or reconfigure roads to have shoulders which farm vehicles and livestock can use to avoid through-traffic.

Mitigation Measure 2: Where these conflicts are most intense, consider measures to separate through-traffic from farm vehicles, either with separate through-ways for farm use or detours for through-traffic at appropriate times of day.

Mitigation Measure 3: Discourage land use decisions that increase the likelihood of conflicts between agriculture and other use of rural roads.

These measures, together, would reduce the impact to a level of insignificance. [Responsibility: Transportation Agency and Planning Department]

Impact 7. Incompatible Circulation Patterns. Development projects within a city's Sphere of Influence (SOI) but not yet annexed are subject to approval by the County. This creates conditions in which County-approved parcel configurations and roadway alignments can be incompatible with the city's transportation plans. Policy R-RT 1 calls for the road system to be planned to accommodate long term development in the vicinity of a project as well as through-traffic from neighboring and other communities. Policy R-TR 3 asks that future width line right-of-way be based on long term development. Policy R-RT 5 addresses subdivisions proposed in rural unincorporated areas which are planned for eventual annexation; it requires the roadway network to be consistent with the city's circulation plan. *Implementation of these policies would reduce the impact to a level of insignificance.*

Mitigation Measure: No further mitigation is required.

Impact 8. Commute Traffic. Some residents of the rural areas commute to jobs in urban areas, contributing to traffic congestion, air pollution and localized noise impacts. Growth under the Plan would contribute to these impacts. Assuming 10% of the 4,000 daily vehicle trips generated by new subdivision occur in the peak commute hour, there would be 400 such trips attributable to the Plan at the end of 15

years. Strategy 3 for the rural unincorporated area calls for facilitating the use of commute alternatives. Policy R-TR 7 encourages use of carpools, transit and other commute alternatives. Policy R-TR 9(i) calls for conveniently located park and ride lots to encourage carpooling and bus uses for commuting, although the Plan does not identify where these could be sited. Policies R-TR (i) 10 calls on the County to provide appropriate facilities at the San Martin CalTrain station to encourage train use among South County commuters. The success of these implementation measures is essential to reducing commute impacts. If all of the Plan policies are implemented, *the amount of commute traffic attributable to the Plan would be less than significant.*

Mitigation Measure: No further mitigation is required.

Impact 9. Scenic Corridors. Some of the growth anticipated under the General Plan would occur along scenic roadways. This development has the potential to impact the scenic experience for motorists. Policy R-PR 45 requires that new development be setback 100 from scenic roads. Policies R-PR 39 and R-PR 47 state that the natural scenery along the County's highways should be protected and that activities along scenic highways that are of a substantially unsightly nature should be screened from view. *This is a potentially significant impact of development, but Plan policies have traditionally been effectively implemented to eliminate this impact.*

Mitigation Measure: No further mitigation is required.

Impact 10. Inadequate General Aviation Capacity. The Draft 1994 General Plan notes that "General Aviation facilities in north County have been facing pressures from various sources." If these pressures cannot be addressed at existing facilities, it may be necessary to relocate some or all general aviation traffic to a new facility in Santa Clara County. The Draft 1994 General Plan recognizes that there are environmental impacts to consider with regard to a new or expanded general aviation airport, including land use compatibility, noise, loss of open space, public safety and growth inducement. (Refer to the EIR section on Aviation Hazards for further discussion of this issue.) There is no new airport planned at this time. *However, if a new or expanded airport is proposed in the future, it could have significant impacts.*

Mitigation Measure 1: Abide by policies and regulations discussed in the Aviation Safety section of this EIR.

Mitigation Measure 2: Undertake environmental review of any proposed new or expanded airport, and abide by recommendation to reduce impacts to the maximum extent possible. [Responsibility: County Transportation Agency]

It is not possible to determine at this time whether impacts of a new or expanded airport will in fact be reduced to a level of insignificance. Therefore this remains a potentially significant impact if an airport is built or expanded.

Cumulative Impacts

Impact 11. Cumulative Traffic Volumes. The 28,000 vehicle trips per day (2,800 x 10 trips) generated by potential growth in the rural unincorporated area over the next 15 years would use rural roads. This cumulative traffic could worsen rural roadway conditions. Draft General Plan Strategy 4 calls for assuring maintenance and safety of rural roads. R-TR 9 (i) through 12(i) are implementation recommendations that address how this should be done. They require that roads be built to standards that assure safety and provide access for emergency vehicles, but require that the environmental impacts of road construction be taken into consideration. (Environmental impacts of road construction are discussed in Impact 5 above.) New development would only be allowed if it reduced its traffic safety impacts and road deterioration to a level of insignificance.

If the Draft 1994 General Plan also requires rural road maintenance programs to be adequately funded. The successful implementation of these policies requires the cooperation of the County Transportation Agency. Policy R-TR 7 calls for commute alternatives to reduce overall vehicular travel. If all proposed plan policies are implemented, the impacts of traffic on rural roads would be reduced, *although it cannot now be determined whether it would be reduced to a level of insignificance.* (See also Impact 7 above.)

The County plans to improve all rural road capacity to the point at which they would accommodate all existing and future traffic, this could have growth-inducing, environmental and fiscal impacts that are considerable and that should be addressed in an EIR.

Mitigation Measure 1: The mitigation measures from Impact 4 apply to cumulative traffic volume impacts.

Mitigation Measure 2: Require an EIR on the transportation plan recommended in Impact 4, and abide by the mitigation measures to reduce the impacts. *It is not possible at this time to determine whether the impacts would be reduced to a level of insignificance.* [Responsibility: County Transportation Agency and County Planning Office]

Impact 12. Countywide Cumulative Traffic. The rural unincorporated area is impacted by cumulative traffic from the rest of the County as well as the Bay Area. Highway 101, which traverses the rural unincorporated area, is one of the major north-south routes in the state. The cumulative impacts of traffic on the countywide road system are comprehensively addressed in the T2010 EIR, to which the interested reader is referred. Development under the Draft General Plan is consistent with the assumptions and analysis of that EIR. The T2010 EIR's conclusions on cumulative traffic impacts in the County as a whole are cited below:

The significant traffic impacts of the T2010 Plan are as follows: Total person trips in Santa Clara County are projected to increase by 11.1% between 1995 and 2010. Transit ridership is expected to increase by 30%. Vehicle miles travelled (VMT) would decrease slightly after 1995. Freeway miles of congestion would increase by 16%, to 67 miles, in the AM peak hour between 1995 and 2010. The increase in congestion is considered a significant impact. No significant congestion of transit systems is projected.

Mitigation Measure 1: Pricing measures could be implemented to make auto travel more costly, reducing highway travel demand. Alternatively, plans to expand highway capacity could be developed to relieve bottlenecks or plans for expanded transit capacity could be developed to relieve congested highways. Congestion would continue to occur even with implementation of all the projects proposed in the T2010 Plan. *The projected future congestion is considered an unavoidable adverse effect.* [Responsibility: County Transportation Agency]

For a discussion of energy and air quality impacts related to transportation, see those respective sections of this EIR.

Endnotes to Transportation Chapter

1. Directional mile counts multiple lanes as one lane for purposes of measuring distance.
2. Santa Clara County Draft 1994 General Plan, Transportation: Countywide Issues and Policies, p .34.
3. Santa Clara County Transportation Plan EIR SCH 90030441, Oct. 1991, p. 2.

CHAPTER 5E

NOISE

Environmental Setting

Noise Sources

In Santa Clara County, the primary noise impacts result from the transportation systems: streets, freeways, rail lines, and airports. Noise impacts from these sources are evaluated in different ways. For roadways, expressways, and freeways, noise contours are typically developed using the U. S. Department of Transportation's Highway Traffic Noise Prediction Model. This model allows transportation planners to estimate the noise contours along roadways based on factors such as the volume of traffic the road carries and the percentage of trucks using that route. The result of roadway noise modeling is a series of contour lines representing decreasing noise levels as distance from the centerline of the roadway increases. These contour lines are given LDN, or day-night average noise level, noise exposure values.

Noise contour mapping was undertaken for the Draft 1994 General Plan. Noise measurements were taken at the following locations, to complement data and contours available from other sources:

- Highway 17: Los Gatos to Santa Cruz County; 10 locations including one 24-hour and nine 3-hour locations.
- U.S. 101: San Jose to Morgan Hill, through San Martin (utilize existing data).
- 1-280: Los Altos to Palo Alto; two 8-hour locations to supplement existing data.
- Highway 152: Merced County to Mt. Madonna Park; 8 locations including one 24-hour location and seven 3-hour locations.
- Santa Teresa Boulevard: Bailey Avenue to Cochrane Road and Day road to Castro Valley Road; three locations including two 24-hour locations and one 3-hour location.
- Monterey Highway: Through San Martin; two locations including one 24-hour location and one 3-hour location.

From the noise measurements, 34 noise contour maps were prepared at a scale of 1 inch equals 500 feet (1:500). These large scale maps are on file with Santa Clara County Department of Planning and Development, 70 West Hedding Street, San Jose. These maps are discussed below.

Reporting Methods

The day-night average noise level (LDN) is one of the ways that the average sound exposure in a 24-hour period can be reported. Because sound levels fluctuate throughout the day and night, scales such as LDN and the Community Noise Equivalent Level (CNEL) collect data for a 24-hour period. For the LDN scale, sounds occurring during nighttime hours (10:00 p.m. to 7:00 a.m.) are given a 10 decibel penalty weighting to account for the greater sensitivity of people to noise during this period. The CNEL scale varies in that it gives added weight to sounds occurring during evening hours, as well as those occurring during the night. For both scales, the contour lines represent the overall average of sound occurring in that particular portion of the community. Table 5E-1 lists typical freeway noise contours in the County.

The CNEL scale is used to indicate the average sound in the vicinity of airports. CNEL contours are mapped for each of the public airports in the County (San Jose International, Palo Alto, Reid-Hillview, and South County). These maps are located in the Airport Land Use Commission (ALUC) Plan.

Land Use Compatibility

The purpose of mapping noise contours in the vicinity of primary noise sources is to avoid siting incompatible types of land uses. The General Plan, supported by the County Noise Ordinance, establishes standards for the noise environment for specific types of land uses. For each type of use, a range of LDN values are shown where that type of land use would be considered satisfactory, cautionary, or critical. For example, residential uses would be considered cautionary above the

Measuring Noise

Three common measures of sound form the basis of County standards discussed in this section: Day-Night Average Sound Level (LDN), Community Noise equivalent Level (CNEL, and A-weighted Sound Level (dBA).

The level of sound that impacts a property varies greatly during the day. As an example, the sound near an airport may be relatively quiet when no airplane is taking off or landing, but will be extremely loud as a plane takes off. In order to deal with these variations, several noise indices have been developed which measure how loud each sound is, how long it lasts, and how often the sound occurs. The indices express all the sound occurring during the day as a single average level, which if it occurred all day would convey the same sound energy to the site.

continued...

**TABLE 5E-1
Santa Clara County Freeway Noise**

Freeway	Average Daily Traffic	Peak-Hour Traffic	Percent Trucks	Distance (ft.) from Freeway Centerline To Noise Contours:	
				55 dBA	65 dBA
U.S. 101 ^a					
South County	35,000	4,500	12	1,300	300
Morgan Hill	55,000	7,200	12	1,800	400
San Jose	180,000	21,700	7	3,100	700
State Route 17 (I-880, Nimitz Freeway)	179,000	17,000	4	2,200	500
I-280	193,000	19,300	3	2,300	500
I-680	127,000	15,100	5	2,200	500
Pacheco Pass Highway	-	-	-	500	-
Santa Teresa Expressway ^b	-	-	-	500	-
Hecker Pass Highway ^b	-	-	-	300	-
Congress Springs Road ^b	-	-	-	200	-

Table Notes:

- a. Noise calculations were performed based on the following sources, unless otherwise noted. Vehicle volumes (average daily traffic and peak-hour traffic) are from Caltrans, 1987, 1986 Volumes on California state highways. Truck traffic is from Caltrans, 1987, 1986 Annual Average Daily Truck Traffic on the California state highway system. Noise contours are calculated on the basis of U.S. Department of Transportation, 1978, FHWA Highway Traffic Noise Prediction Model. FHWA-RD-77-108.
- b. Information is from the Santa Clara County General Plan. Vehicle volumes are not provided.

SOURCE: Planning Analysis and Development.

TABLE 5E-2
Noise Compatibility Guidelines, by Land-Use Category^a

Land Use Category	Satisfactory	Cautionary ^b	Critical ^c
Residential	less than 55	55 to 65	more than 65
Commercial:			
Hotel	less than 55	55 to 70	more than 70
Other	less than 65	65 to 75	more than 75
Industrial	less than 70	70 to 75	more than 75
Public or Semi-Public:			
Churches, Hospitals and Nursing Homes	less than 60	60 to 65	more than 65
Schools and Libraries	less than 60	60 to 65	more than 65
Civic Buildings and Other	less than 60	60 to 70	more than 70
Open Space:			
Agriculture	less than 65	more than 65 ^d	
Parks, Open Space, Reserves, Wildlife Refuges, etc.	less than 55	more than 55 ^d	

Table Notes:

- a Santa Clara County General Plan. Noise levels measured in dB Ldn.
- b New development would need an acoustical analysis to determine what attenuation measures are necessary to maintain an indoor level less than, or equal to, the maximum interior noise levels shown in Table 5E-2.
- c New development is permitted only if uses are entirely indoors and building design limits interior levels to less than or equal to the maximum interior noise levels shown in Table 5E-2.
- d No critical noise levels are listed for open space uses. Homes in agricultural areas shall be subject to the Residential standards. Public buildings in parks and open space areas shall be subject to the Public or Semi-Public standards. For open space use, the maximum level of noise which a new land use may impose on neighboring open space shall be the upper limit of the Satisfactory noise level.

SOURCE: Santa Clara County General Plan.

55 dB LDN, and critical above 65 dB LDN. Table 5E-2 shows noise compatibility guidelines by land use. Table 5E-3 is the recommended maximum interior noise levels. The ALUC has established a similar chart for determining the compatibility of land uses in airport vicinities. In the case of airport noise contours, it is generally recognized that the 65 dB CNEL line is the boundary of the area in which residential uses are incompatible. Within the 65 dB CNEL contour, noise levels as high as 108 dBA may be experienced during jet takeoffs. This is offset by the curfew between 11:30 p.m. and 6:30 a.m. when only emergency operations are permitted.

Moffett Field is under federal jurisdiction. The ALUC has no authority over land uses around Moffet. Moffett's Air Installation Compatible Use Zone (AICUZ) map places limitations similar to those of the ALUC on land uses in the vicinity of the field. Again, looking at residential uses, the AICUZ Land Use Objectives Matrix shows them to be normally unacceptable above 65 dB CNEL.

Noise Standards

In addition to the land use compatibility guidelines found in the General Plan, the ALUC Plan, and the Noise Ordinance, standards for maximum interior noise levels can also be found within those documents.

These standards allow planners to look at specific land uses in relation to their particular noise environment. They can be used to determine the compatibility of a proposed land use with existing development, and to calculate the amount of insulation needed by either the offending use or the noise receptors.

Measuring Noise (continued)

The most popular of these sound indices are the Day-Night Average Sound Level (LDN) and the Community Noise Equivalent Level (CNEL). These two indices both respond to the community preference for quiet during the evening and night by a heavier weighting of noises which occur at night than of daytime noise. The General Plan uses LDN system for measuring sound as the basis for its standards. The LDN system is recommended by the Environmental Protection Agency for community noise planning. Due to the unique noise characteristics associated with aircraft, the Santa Clara County Airport Land Use Commission (ALUC) uses the CNEL system of measurement for noise near airports.

Sound is measured in decibels (dB) using a special meter. The decibel scale of sound is logarithmic, so that increases in a measured level represent geometrically increasing amounts of sound (i.e., twenty dB is 10 times louder than 10 dB, and 30 dB is 100 times louder than 10 dB).

The human ear is more sensitive to some frequencies than others, and the most useful scale for sound measurement is one that is adjusted to emphasize those frequencies to which the human ear is most sensitive. This adjusted scale is called "A-weighted sound level" and is indicated by the symbol "dBA." The county's recommended maximum interior noise table, discussed below, is based on A-weighted sounds.

TABLE 5E-3
Recommended Maximum Interior
Noise Levels
for Intermittent Noise

Land Use	Noise Level (dBA)
Residential	45
Commercial	
Hotel-Motel	45
Executive Offices, Conference Rooms	/55
Staff Offices	60
Restaurants, Markets, Retail Stores	60
Sales, Secretarial	65
Sports Arena, Bowling Alley, etc.	75
Industrial	
Offices	55-60
Laboratory	60
Machine Shop, Assembly, & Others	75
Mineral Extraction	75
Public or Semi-Public Facility	
Concert Hall & Legitimate Theater	30
Auditorium, Movie Theater & Church	45
Hospital, Nursing Home & Firehouse (sleeping quarters)	45
School Classrooms	50
Library	50
Other Public Buildings	55
<i>SOURCE: Santa Clara County General Plan</i>	

Noise sources in the unincorporated areas of the County include: quarries, shooting ranges, landfills, concrete manufacturing, recycling centers, heliports, manufacturing operations, construction operations, and farming operations.

Sensitive Noise Receptors

Human response to noise is subjective and varies considerably from one individual to another. It is generally recognized that certain types of land uses in both rural and urban settings are particularly sensitive to the noise environment. These "sensitive receptors" include residential uses, hotels and motels, theaters, churches, hospitals, nursing homes, sleeping areas in firehouses, schools, and libraries.

The concept of sensitive receptors is based on our physiological response to noise. The Environmental Protection Agency (EPA) has done studies¹ quantifying human responses to specific levels of noise. Many of the sensitive receptors listed above involve sleeping areas. The EPA studies show that, at levels of 40 to 50 dBA, some people report difficulty in falling asleep. Once asleep, most people are disturbed when noise levels exceed 70 dBA and 35% awoken at 50 dBA.

Other types of sensitive receptors include parks and recreation areas where people generally expect lower ambient noise levels. Rural parks in particular tend to be quieter than other areas, and people are disturbed by lower levels of noise than they might be in other situations.

General Reactions to Noise

The primary physiological response to excessive noise is hearing loss. The EPA has identified 70 dBA² as the maximum allowable 24-hour exposure necessary for protection from hearing loss. As decibel levels of exposure increase, the amount of time a person can safely be exposed decreases.

Although many studies have suggested a correlation between excessive exposure to noise and the physiological and psychological symptoms of stress, no criteria have yet been established.³ Studies have found, however, that people are more able to adapt to a steady level of noise than to impulsive noises, such as gunshots, which occur intermittently and tend to trigger physical

Noise Sources

Noise sources are divided into two categories: point sources and line sources. Point sources emanate from a single point, whether stationary or moving. Line sources emanate from a steady stream such as traffic on a roadway. As one moves away from a sound source, the sound level gradually decreases or attenuate. Aside from distance, a sound may be attenuated by objects which shield a potential receiver from unwanted sound.

reactions (i.e. the adrenalin release of a "fight or flight" reaction).

Road Noise

Roads and especially freeways are a major source of noise in Santa Clara County. Table 5E-1 presents traffic and noise levels for major traffic routes in the county, including US 101, I-280 and I-680. The table shows that the 55 dB LDN noise contour extends a distance of 1,300 to 3,100 feet for these roads. That is, traffic noise of 55 dB LDN can be heard at 1,300 to 3,100 feet from Highway 101 in South County and San Jose, respectively. Noise levels of 65 dB LDN can be heard at distances of 300 to 700 feet from Highway 101 in these locations. The noise characteristics of the roads which were monitored for this EIR are discussed below. Each road and noise monitoring location is briefly discussed in the context of the surrounding land use.

The existing noise levels in the unincorporated area of Santa Clara County were determined from measurements made between December 1993 and March 1994 at 23 locations (See Appendix 5E). The measurement locations were along major roadways within the county. All roadways were measured at more than one location to account for changes in traffic conditions. The sound levels were recorded for periods of 3, 8 or 24 hours at each location, to best determine the 24-hour noise exposure for the various segments of roadway. The 24-hour measurements were used to calibrate the 3-hour measurements, where recent detailed noise data were not available. Eight-hour measurements were made for roadways that have been recently studied in detail by others.

The 3-hour measurements were made for two hours during the daytime period of the LDN index (7:00 a.m. to 10:00 p.m.) and for one hour during the nighttime period of the index (10:00 p.m. to 7:00 a.m.). The 8-hour measurements were made for six daytime hours and two nighttime hours.

Noise Compatibility Guidelines

- *Satisfactory noise levels* are those which pose no serious threat to the given land use. For example, standard house construction will reduce interior noise levels to 55 LDN, a point where normal sleep will not be interrupted most outside noises. Agricultural activities, on the other hand, may be conducted in a much noisier environment, so the "satisfactory" exterior level is set at 70 LDN. Noises above 70 Ldn can be detrimental; normal human activities should not take place in unprotected areas impacted by a LDN above 70.
- *Cautionary noise levels* are those in which normal building and design are not adequate to protect the land use but which can be mitigated by simple methods of noise attenuation.
- *Critical noise levels* are those for which simple solutions to noise attenuation are not adequate and where uses should be allowed only if they have been designed for noise reduction by a professional who is competent in sound reduction.

Highway 17

State Highway 17 in the unincorporated area of Santa Clara County extends from the Town of Los Gatos proper to the summit of the Santa Cruz Mountains. The noise environment within the vicinity of Highway 17 is created primarily by traffic on the freeway. Highway 17 carries a high volume of heavy truck traffic as it is the main thoroughfare between the greater Bay Area and Santa Cruz County. The roadway is a four-lane winding mountain road with a typical speed limit of 50 mph. Steeply sloping hillsides surround both sides of the road for the majority of its distance within the study area. The traffic noise dispersion rate varies with topography with noticeable sound reflections bouncing off the hillsides and into the canyons adjacent to the road.

U.S 101

The portions of Highway 101 in the study area are broken up into many small segments of roadway that begin at the Highway 85 interchange to an unspecified location approximately halfway between San Felipe Road and Cochrane Road. There are two one-mile stretches of road in the County north of Morgan Hill. The study area begins again at Tennant Avenue and continues to Buena Vista Avenue. South of Gilroy, Highway 101 joins Monterey Highway and exits the county. Traffic noise is the primary noise source along Highway 101, with secondary sources consisting of aircraft noise from South County Airport and railroad noise along the section of Highway 101 south of Gilroy where the road enters San Benito County. The highway is a four to eight lane freeway under the jurisdiction of CalTrans. The topography along the roadway varies from high hillsides rising above the road to flat areas of the Coyote Valley lying well below the elevation of the road.

Interstate 280

Interstate 280 within the study area consists of a three mile long segment extending from Foothill Expressway in Cupertino to Magdalena Road in Los Altos, and a second segment extending from a location north of Page Mill Road for a distance of 1.7 miles to the San Mateo County line. I-280 is a sweeping curved roadway heading generally uphill to the north. Widely spaced single-family homes are located along both sides of the highway. Some homes are located above the road elevation with direct lines of sight to the road, thereby realizing no acoustical shielding from topography. Other homes are located below the road elevation, where in most instances, they are afforded some topographical shielding.

Highway 152

State Highway 152 in the study area extends from the Merced County line near San Luis Reservoir to Mt. Madonna Park at the Santa Cruz County line. From Merced County, the roadway is Pacheco Pass Road and is a two to four-lane road winding through the Mt. Hamilton range into the San Felipe area and then into the City of Gilroy. Highway 152 in the unincorporated area of the County then continues as a 2-lane highway from the Bodfish Creek/Uvas Creek junction to Santa Cruz County as Hecker Pass Highway. The noise environment is created primarily by street traffic. Highway 152 carries a significant volume of heavy trucks, over both Pacheco Pass and Hecker Pass as these roadways are the main connectors between the South Bay Area and the Central Valley, and between the South County area and Santa Cruz County, respectively.

Santa Teresa Boulevard

Santa Teresa Boulevard is divided into two main segments: 1) Bailey Road to Llagas Road and 2) Hecker Pass Highway to Highway 101, near Gavilan College. The roadways are two-lanes at both the northern segment and the southern segment. The surrounding areas are flat agricultural lands with minimum development. Santa Teresa Boulevard traffic provides the primary noise environment with the exception of the portions of the road that intersect or approach Monterey Highway.

Monterey Highway and the Southern Pacific Railroad

Monterey Highway and the adjacent Southern Pacific Railroad tracks are segmented through the study area and run approximately parallel with U.S. 101 from San Felipe Road in San Jose to Morgan Hill. Monterey Highway is situated approximately 1/4 to 1 mile west of Highway 101. At San Martin, where the road and railroad converge they continue for five miles to the City of Gilroy. South of Gilroy, Monterey Highway converges with U.S. 101, and diverges from the Southern Pacific Railroad (S.P.R.R), then exits the County of Santa Clara. The railroad also splits south of Gilroy, with the main line continuing on to Salinas and the secondary line continuing to Hollister. Surrounding land is primarily agricultural with minimal residential and commercial development. Auto, truck and train traffic are the primary noise sources in the roadway vicinity.

Railroad Noise

Along the Southern Pacific Railroad, the sound levels were recorded for one hour during a train passby. Railroad operational data provided by the Southern Pacific Transportation Company

were used to calculate the LDN. The daily train operations consist of four freights (two daytime, two nighttime), four CalTrain trains (two daytime, two nighttime) and two Amtrak trains (two daytime). To obtain a more complete understanding of the noise environment, this should be read in conjunction with noise contour maps on file with the county.

Airport Noise

Ensuring compatibility between aircraft noise and various types of land uses is one of the primary functions of the ALUC's Land Use Plan for Areas Surrounding Santa Clara County Airports. The ALUC Plan includes a detailed discussion of the types of noise generated by aircraft, how the noise environment around airports is measured, how noise compatibility standards were established and the steps being taken to control airport noise.

The ALUC Plan regulates land use in and around airports in three primary ways: safety zones, the noise zones, and height restrictions. With regard to the noise zones, noise that emanates away from airstrips and airplane flight paths can be represented by concentric noise contours around the airport. For all County airports, these contours have been mapped and included within the ALUC Plan. The contours delineate zones where land use is restricted, protecting citizens on the ground from the detrimental effects of exposure to excessive airplane noise.

There are five airports in Santa Clara County. Three are designed for general aviation uses (Palo Alto, Reid-Hillview, and South County), one is an international airport (San Jose), and one is a research facility (Moffett Field), operated by the National Aeronautics and Space Association (NASA) as of July 1, 1994. The County and San Jose have jurisdiction over the general aviation airports and the international airport, respectively.

According to the State Department of Transportation, San Jose International Airport is classified as one of 28 Commercial Service-Primary Airports in California. There were 344,000 operations from this airport in 1989. The airport is owned and operated by the City of San Jose.

Santa Clara County manages and operates the three general aviation airports. Palo Alto Airport occupies 182 acres near San Francisco Bay in the northwestern part of the county. The airport is classified by the FAA as a Basic Utility II airport, meaning that it can serve about 75% of the single-engine and small twin-engine airplanes used for personal and business purposes. A Basic Utility II airport can also serve some small business and air taxi-type twin-engine airplanes. federal statistics indicate that there were 240,000 aircraft operations at this facility in 1990.

Reid-Hillview Airport, located on the east side of the City of San Jose, is near the center of the County. It, too, is classed as a Basic Utility II facility and occupies 179 acres. This facility supported 207,000 aircraft operations in 1990.

The South County Airport is in San Martin, the unincorporated area between the cities of Gilroy and Morgan Hill. South County Airport is also a Basic Utility II airport and occupies 179 acres. According to the County Aviation Division records, there were approximately 60,000 aircraft operations at this facility in 1990.

In addition to airports, heliports contribute to ambient noise levels in many areas of the county. Heliports may be operated for private businesses and individuals, and emergency uses. Noise at heliports is primarily produced by helicopters on takeoff or landing and in warm-up or cool-down procedures.

Draft 1994 General Plan Strategies

The Draft 1994 General Plan Health and Safety Chapter includes two strategies to address noise in the rural unincorporated area. These are:

Strategy 1: Minimize Noise Conflicts

Strategy 2: Minimize Exposure to Airport Noise

Growth under the Draft 1994 General Plan has the potential to result in noise impacts through the development of noise-generating projects, the development of noise-sensitive projects (such as residential), and through the increase in transportation-related noise in the rural unincorporated areas. Noise impacts are primarily to "sensitive receptors," which can be defined as land uses such as single or multi-family dwellings, schools, nursing homes, and day care centers, that are particularly susceptible to noise impacts.

Policies and Regulations

A. Plan Policies that Foster Environmental Protection

This section of the EIR discusses the existing polices, ordinances and regulations in the County that serve to protect the rural unincorporated environment. The 1980 General Plan policies relating to noise were incorporated into the Draft 1994 General Plan without substantial changes or additions. The Draft 1994 General Plan also includes a discussion of other ordinances and regulations implemented in the County to minimize noise conflicts.

Policies from the 1980 General Plan

The noise policies in the 1980 General Plan are designed to protect existing land uses from unacceptable noise levels as well as prevent new development in areas already noise impacted. Policy R-HS 1 states that any public or private project which is likely to generate significant noise levels should be required to mitigate those noise impacts on the surrounding land uses. Implementation measures R-HS (i) 1-6 indicates how noise should be taken into account during the planning, design and review of specific projects. New development in areas impacted by noise should be denied, approved, or conditionally approved to achieve satisfactory interior noise levels. [Policy R-HS 3] The noise levels that must be achieved are contained in the land use compatibility guidelines section of the Noise Ordinance and Title 24 of the California Administrative Code.

B. Ordinances and Regulations that Reduce Impacts

Noise Ordinance:

This ordinance sets noise standards to control unnecessary, excessive and annoying noise and vibration. It sets maximum noise standards for both exterior and interior settings depending on the location of the noise sources, i.e. residential, commercial, or industrial area. Specific noise limits are listed for various types of noise generators (i.e. construction/demolition, loudspeaker, animals, vibration, etc.)

Right to Farm Ordinance:

Requires an agricultural disclosure statement to be included in real estate transfers if the property in an agricultural area and residents might be subject to noise, odors, or dust related to agricultural operations. It also sets a procedure for dispute resolution.

Title 24 of the California Administrative Code:

Title 24 of the California Administrative Code regulates interior noise levels for new residential dwellings. Title 24 specifies the maximum allowable sound transmission between dwelling units in new multi-family buildings, and limits allowable interior noise levels in new multi-family residential units to 45 dBA, CNEL. For new multi-family construction posed in areas where the existing exterior noise level is greater than 60 dBA, CNEL, Title 24 requires that an

acoustical analysis be performed to demonstrate that interior noise levels would not exceed 45 dBA.

C. **Significance Criteria**

According to *Supplementary Document G* of the California Environmental Quality Act (CEQA) Guidelines, a project will normally have a significant effect on the environment if it *will increase substantially the ambient noise levels of adjoining areas*. Short-term construction noise impacts are considered significant if construction activities would affect noise-sensitive receptors for a substantial amount of time, if expected noise levels would endanger the hearing of receptors near the construction site, or if construction activities would affect receptors during noise-sensitive periods.

Long-term noise impacts are considered significant if: (1) the development projects allowed by the land use designations in the 1994 Draft General Plan would cause noise levels to increase by five dBA or more and in the process create a noise environment that is incompatible with existing or planned uses; or (2) if the project would cause a three dBA increase (the threshold of noticeable change) where the existing noise environment is already marginally unacceptable or worse for its current use.

According to CEQA, a project would normally have a significant effect on the environment if it would conflict with adopted environmental plans and goals of the community where it is located. Thus, implementation of the Draft 1994 General Plan would have a significant noise impact if it would result in the development of residential land uses in areas with ambient noise levels higher than that recommended by the Land Use Compatibility Guidelines contained in the Noise Element. The noise compatibility guidelines establish noise constraints for future development. Existing ambient noise levels determine the type of land use that is appropriate for an area. The potential to expose sensitive receptors to noise levels above recommended standards would also act as a constraint to future development.

Impacts and Mitigations

Impact 1. Construction-Related Noise Intensity and Duration. Anticipated development under the Draft 1994 General Plan would result in intermittent construction activities that would generate high noise levels on and adjacent to construction sites. Construction noise may be annoying to some residents. However, such activities are temporary and can be performed without violation of identified noise standards. The noise ordinance limits the hours of construction activity from 7:00

a.m. to 7:00 p.m., Monday through Friday and limits noise from construction equipment. *Given the implementation of the land use compatibility guidelines*

contained in the noise ordinance, noise policies and related implementation measures, construction noise would be a less than significant impact.

Mitigation Measure: No further mitigation is required.

Impact 2. Noise Impacts of Future Traffic on existing Land Uses. The Draft 1994 General Plan could result in creation of 400 new subdivision parcels in the rural unincorporated portions of the County. Assuming 10 vehicle trips per day, a total of 4,000 trips would be generated over the 15-year life of the Plan, or 267 per year. This increase in traffic *would dispersed over the Plan area and is not expected to have a significant impact.*

Cumulative Impacts: Traffic due to projected cumulative development associated with single family residences on 2,401 existing lots of record would generate 24,010 vehicles trips per day by the year 2010. If this traffic is added to that generated by development under the Plan, a total of 28,010 vehicle trips would be added by 2010, or 1,867 per year. These trips would be dispersed along roads throughout the planning area.

Plan traffic combined with cumulative traffic in the area could have an adverse impact on existing residential land uses or sensitive receptors, but this increase would be expected to be less than a 5 dBA increase on any particular road. *Future traffic impacts on existing land uses would be less than significant.*

Mitigation Measure: No further mitigation is required.

Impact 3. Exposure of Future Land Uses to Traffic Noise. As a result of growth Countywide, there would be an increase in motor vehicle traffic and noise levels throughout the County. The following areas have the possibility of generating or incurring impacts with development under the Plan.

Along Hecker Pass within the existing 55-60 dBA contours there are some parcels that may be developed for residential use. With proper siting and with the required setbacks, new residential development in the area would be within the 55 dBA contour.

Aldercroft Heights, Lexington Basin and Redwood Estates are residential areas that have existing noise conflicts. Some residential uses are within the 65 dBA contour. This area is considered built out and no more subdivision of existing lots is expected in this area. Any development would be required to be set back from Highway 17, which could minimize noise impacts. There are some additional smaller pockets of existing noise conflicts along Highway 17 as well as additional parcels that may be developed as single family residential uses. There are some existing residential units within the 60-65 dBA contour along Highway 17. The number and location of existing parcels is not known. Constraints such as slope, lack of drainage for septic tanks and geologic hazards might prevent some of the parcels from being developed. Highway 17 is a designated scenic corridor and development must be setback a minimum of 100 feet from the roadway. This would help minimize noise conflicts.

In San Martin some mixed development (including residential) is possible along the US 101 corridor and could result in a noise conflicts. Residential subdivision is possible along the 101 corridor in the San Martin area as well as development on existing parcels. Highway 101 is designated as a scenic corridor and would require a 100 foot setback for development. In most cases, with proper siting and setback distances, noise impacts and development allowed under the Plan would be minimized. The 20 acre minimum parcel sized required in Hillside areas and setback distances required from roadways would mitigate noise impacts in these areas. *This would be a less than significant impact.*

Suggested Additional Mitigation Measure: As part of the building permit process, land owners and developers should refer to the noise contour maps on file with the County to determine appropriate siting and setback distances to minimize possible noise conflicts.

Impact 4. Train-related noise. Railroad operations along the S.P. tracks involve SP, Caltrain and Amtrak use. Passenger trips on CalTrain are expected to increase from about 33,000 per day to 39,000 per day in 2010. The T2010 Transportation Plan includes a Long Range Rail Master Plan which calls for the integration of intra-County and regional rail coordination. The Draft 1994 General Plan supports this plan. The Master Plan notes the possibility of increasing the CalTrain service on the US 101 corridor from four to eight trains daily. The increase in trains could raise train noise levels in the residential areas close to the rail corridor. At the present time, there are no noise complaints on file with the County resulting from railroad noise. It is not expected that future noise levels,

even with additional trains, would have a adverse noise impact. The existing noise contour maps show noise levels of about 60 dBA 100 feet from the tracks. There are some areas along the track with higher noise levels when the noise is combined with traffic noise along US 101. Train noise is intermittent and the additional trains would generate a maximum of 16 passbys on a daily basis; this would extend the 60 dBA noise contour. Plan policies would prevent new development in areas of possible noise conflict. Projects would be required to achieve noise levels consistent with the land use compatibility guidelines established by the county. *Noise resulting from train service would not be a significant impact.*

Mitigation Measure: No further mitigation is required.

Impact 5. Airport Related Noise. Noise generated during take-off and landing is usually the loudest of airport operations, but planes or helicopters in flight can also generate substantial noise. South County Airport (the only air facility in the rural unincorporated area) had approximately 60,000 operations in 1990. South County Airport is also a heliport; helicopters produce noise on takeoff and during landings, warm-up and cool-down procedures.

South County Airport keeps a log of noise complaints registered against the airport. In 1993, 20 complaints were filed, 18 of which were flights which did not originate at South County Airport. In 1994 there have been eight complaints filed as of July. The majority of the complaints are related to crop dusting airplanes. The airport has an established procedure for handling these complaints. If a resident calls South County Airport to complain about high noise levels, the complaint is logged and the resident is sent an Federation Aviation Administration (FAA) pamphlet which explains how to register a complaint with the FAA. The resident is also informed about the specifics of the flight. Crop dusting flights that originate from South County Airport are required to provide to the airport maps of the area to be flown, exact locations of their flight, identification of materials flown before starting their flight, this and other information about the type of materials used and the duration of the job. This information is available to the public.

The frequency of operations at South County Airport is expected to remain the same through the year 2010. The FAA, ALUC, the County and the Airport all have policies in place to protect residents from exposure to excessive airplane noise and to ensure land use compatibility in future development. *Airport related*

noise would be a less than significant impact.

Mitigation Measure: No further mitigation is required.

Impact 6. Cumulative Noise Impacts. The amount of development projected over the southern portion of the County by the year 2010 would not be expected to cause a significant increase in noise levels (greater than 5 dBA) in the rural unincorporated portions of the County. *Noise from development in the rural unincorporated portions of the County would be a less than significant impact.*

Mitigation Measure: No further mitigation is required.

Endnotes to Noise Chapter

1. U.S. Environmental Protection Agency, 1981, Noise Effects Handbook.

Environmental noise is measured in units of decibels (dB), which are on a logarithmic scale. The dBA, or A-weighted decibel, refers to a scale of noise measurement that approximates the range of sensitivity of the human ear to sounds of different frequencies. The normal range of human hearing extends from about three dBA to about 140 dBA. A 10-dBA increase in the level of a continuous noise represents a perceived doubling of loudness; a three-decibel increase is barely noticeable to most people.

2. U.S. Environmental Protection Agency, 1981, Noise Effects Handbook.
3. Ibid, EPA

CHAPTER 5F

CLIMATE AND AIR QUALITY

Environmental Setting

Climate

Santa Clara County's climate is shaped by the same forces that influence and control the overall weather patterns of the San Francisco Bay Area Air Basin. In general, northwesterly winds generated by high-pressure cells in the Pacific are drawn through the Golden Gate and forced into a more westerly orientation. Once inside the Bay, this air mass is split and re-channeled by the East Bay hills, producing southwesterly winds at San Pablo and northwesterly winds at San Jose. Wind data taken at San Jose Airport indicate the predominance of northwesterly and west-northwesterly winds during most of the year.

During the summer, the semi-permanent high-pressure zone of the eastern Pacific Ocean normally remains near the California coast. High-pressure systems characteristically supply dry air that warms as it descends. This dry, subsiding air often acts as a cap over the cooler marine air near the surface and restricts precipitation. Subsidence inversions may be several thousand feet deep and, together with strong sunlight, can produce worst-case conditions for the formation of photochemical smog, of which the largest single component is ozone. In addition, summer winds are generally light and provide little ventilation of pollutant emissions.

In the winter, the Pacific high-pressure cell retreats southward, exposing the Bay area to numerous low-pressure storm systems. Between storms, however, there are periods of stagnation characterized by very light surface winds. Surface inversions, observed most often in the morning from October to February, are caused by radiation cooling of land surfaces, rather than subsiding air, but they, too, trap pollutant emissions close to the ground. Both types of inversion may combine in the fall to produce the heaviest pollution.

Air Quality

The air quality of a region is determined by the quantities and kinds of pollutants emitted, and by the concentrations of these pollutants that accumulate under the influences of local meteorology and topography. The important effect of a temperature inversion is to prevent pollutants from rising and being diluted vertically. The pollutants are trapped in the lower layer

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of air where people breathe. The Santa Clara Valley is bordered on the south, east, and west by mountain ranges. Under an inversion, pollutant emissions from urban areas to the north, as well as those generated in the greater San Jose area, are pushed up against the mountains by the northwesterly winds. Local conditions thus act to frequently concentrate the pollutants in Santa Clara County rather than disperse them.

Over the last decade, air quality in the Bay Area and Santa Clara County has experienced a significant improvement because of stricter emissions regulations for stationary (point) and automotive (non-point) sources. In the past, air quality was poorer; the air contained high levels of lead, carbon monoxide, and other pollutants. Presently, some pollutants continue to violate state and federal air quality standards. On average, the state ozone standard is exceeded 10-20 days a year since the late 1980s, most often on hot sunny days in the inland valley. The CO standard is exceeded up to four times annually, usually on cold winter nights. According to projections by the Bay Area Air Quality Maintenance District (BAAQMD, see below), the state CO standard should be attained by about 1995. The sidebar lists air pollutants of concern, their primary sources, health effects, and California standards (i.e., air pollution levels not to be exceeded).

Air Quality Regulations

Three agencies are primarily responsible for improving air quality in the Bay Area: the Bay Area Air Quality Management District (BAAQMD), which primarily monitors and controls emissions on stationary sources such as industrial plants, oil-burning power plants, and airports; the California Air Resources Board (ARB), and the U.S. Environmental Protection Agency (EPA), which sets federal air quality standards.

Air quality is controlled through the attainment of ambient standards (maximum allowable pollutant concentrations) and enforcement of emission limits (maximum allowable rates in pounds/hour, pounds/day, tons/year, etc.) for individual sources. The federal Clean Air Act (as amended in 1977) required the U.S. Environmental Protection Agency to identify National Ambient Air Quality Standards (NAAQS), which represent minimum air quality requirements that the states were to attain by 1987. NAAQS have been established for ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter (PM₁₀), and lead (Pb). Of the five criteria pollutants, the Bay Area has been classified as a non-attainment area for federal standards for carbon monoxide and ozone levels. Levels for fine particulate matter have also exceeded the standards.

Other air pollutants have been found to be highly injurious, even in small quantities, but because they are relatively uncommon, most have not gone through the lengthy and costly process needed

to set ambient air quality standards. Instead, these pollutants are controlled through the National Emissions Standards for Hazardous Air Pollutants (NESHAPS) emissions limits that have been promulgated by EPA. In addition to adopting NESHAPS regulations, the California Air Resources Board has established a comprehensive state program for the study, identification, and control of toxic (i.e., hazardous) air pollutants.

California has adopted, for the most part, more stringent ambient standards than the NAAQS for these "criteria" pollutants (i.e., those for which NAAQS have been established) and, in addition, has set ambient standards for sulfates, hydrogen sulfide, and vinyl chloride. In addition to ambient concentration standards, the BAAQMD has established regulations limiting the emissions of pollutants such as particulates and lead from specified stationary sources.

The BAAQMD's Air Quality Plan identifies air pollutant control strategies, including new source emissions controls and more stringent control of currently regulated sources to attain mandated air quality standards. New development must be consistent with the strategies of the BAAQMD for reducing levels of two non-attainment criteria pollutants: carbon monoxide and ozone, and for maintaining the attainment levels of the other criteria pollutants: NO₂, sulfur dioxide, suspended particulate matter and lead. The BAAQMD regulates air quality both through emissions standards, which limit the amount of air pollutants discharged into the atmosphere, and through ambient air quality

CRITERIA POLLUTANTS

Ozone. The most severe air quality problem in the Bay Area is high concentrations of ozone (O₃). O₃ is not emitted directly into the atmosphere, but is a secondary pollutant produced through photochemical (light-induced) reactions involving hydrocarbons (HC) and nitrogen oxides (NO_x). Significant ozone generation requires about one to three hours in a stable atmosphere with strong sunlight. For this reason, the months of April to October are the "ozone season."

Carbon Monoxide. Carbon monoxide (CO) is an odorless, invisible gas usually formed as the result of incomplete combustion, or oxidation, of organic substances (complete combustion forms carbon dioxide, CO₂). Most of the carbon monoxide emitted in the Bay area comes from automobiles. Ambient CO levels normally closely follow the timing and distribution of vehicular traffic. CO levels are influenced also by wind speed and atmospheric mixing.

Suspended Particulate Matter. Suspended particulate consists of fine dust, most of it less than 30 microns (micrometers) in diameter, that stays suspended in air for long periods. Fine particles less than 10 microns in diameter (called PM₁₀) have been identified by the EPA as a health hazard, because they penetrate deep into the lungs during breathing and can lodge there. (Larger particles tend to be trapped in the nose, or cleared by coughing or sneezing.)

The EPA established new NAAQS for PM₁₀ in July, 1987. These are: 150 micrograms/cubic meter for the 24-hour average and 50 micrograms/cubic meter for the annual geometric mean. (State PM₁₀ standards are more stringent: 50 micrograms/cubic meter for the 24-hour average and 30 micrograms/cubic meter for the annual geometric mean.)

continued...

standards, which limit the total concentration of a specific pollutant in the atmosphere.¹

The BAAQMD operates a regional air quality monitoring network that provides information on average concentrations of pollutants for which state or federal agencies have established ambient air quality standards. Ambient air pollutant concentrations recorded in Santa Clara County are among the highest in the Bay Area. The urban nature of the northern portion of the County, its position downwind of other Bay Area cities, and the local topography, which traps and concentrates pollutants, all contribute to the poor air quality.

The BAAQMD has five monitoring stations in the County: Alum Rock, San Jose (downtown), Moorpark, Gilroy and Los Gatos. Table 5F-1 is a nine-year summary of monitoring data for these major pollutants, collected at the downtown San Jose station on North Fourth Street. Only the downtown San Jose station monitors all five criteria pollutants. Because the air quality in San Jose is most effected by local vehicular traffic and small scale sources spread over the urban area, rather than by stationary sources, Table 5F-1 is likely to be representative of the northern urban area. Ozone levels are similar in the southern part of the County, but concentrations of other pollutants are lower. Air pollutant concentrations measured at the downtown San Jose monitoring station are presented in Table 5F-1 with corresponding ambient air quality standards.

Santa Clara County has been designated an attainment area for nitrogen dioxide and sulfur dioxide by the U.S. Environmental Protection Agency, but is still a nonattainment area for ozone and carbon monoxide². As noted above, an attainment area is an area where the average ambient concentrations of the pollutant being addressed have consistently been within (i.e., lower than) the standards in recent years.

Ozone

The numerous small sources emitting most of the HC and NO_x are spread throughout the region. The problem is most severe in northern Santa Clara County, where O₃ concentrations

Nitrogen Dioxide. NO₂ is the "whiskey brown" colored gas occasionally observed during periods of heavy air pollution. Nitrogen oxides from man-made sources are formed primarily from high-temperature combustion. The major sources NO₂ are vehicular, residential, and industrial combustion. Ambient concentration standards for NO₂ are being met in the Bay area, and the BAAQMD does not expect these standards to be exceeded in the future.

Sulfur Dioxide. The major source of SO₂ in the air basin is combustion of high-sulfur fuels. Ambient concentration standards for SO₂ are being met throughout the Bay area, and the BAAQMD does not expect these standards to be exceeded in the future.

TABLE 5F-1
San Jose Air Pollutant Summary, 1985-1990
(120 North Fourth St. Station)

Pollutant	Standard	1985	1986	1987	1988	1989	1990	1991	1992	1993
Ozone (O3: Oxidant) Maximum: 1-hr average, pphm Exceedances: Days per year	0.09	0.14 N/A	0.14 N/A	0.14 N/A	0.12 12.0	0.13 10.0	0.12 4.0	0.10 6.0	0.12 3.0	0.11 3.0
Carbon Monoxide (CO) Maximum: 8-hr average, ppm Exceedances: Days per year	9.0	15.6 16.0	11.0 4.0	7.4 0.0	10.3 2.0	12.0 6.0	11.3 2.0	10.9 4.0	7.3 0.0	6.6 0.0
Nitrogen Dioxide (NO2) Maximum: 1-hr average, pphm Exceedances: Days per year	0.25	0.19 0.0	0.16 0.0	0.17 0.0	0.16 0.0	0.15 0.0	0.15 0.0	0.14 0.0	0.10 0.0	0.12 0.0
Sulfur Dioxide (SO2) Maximum: 24-hr average, ppb Exceedances: Days per year	0.05	0.004 0.0	0.007 0.0	0.004 0.0	0.004 0.0	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A
Suspended Particulate Matter (PM ₁₀) Annual Geometric Mean, µg/m ³ Exceedances: Days per year	30.0	N/A N/A	N/A N/A	N/A N/A	38.8 14.0	34.3 15.0	27.2* 9.0*	27.5 10.0*	28.4 13.0	26.9 10.0

Table Notes: Standards are Federal for CO, California for NO2 and SO2, both for O3 and PM₁₀. Values in bold are those values which equal or exceed the standards. Suspended particulate matter data is not shown for 1985-1987 because it was unrepresentative due to intensive construction activity.

* Based on 6-day national schedule.

ppm: parts per million

µg/m³: micrograms per cubic meter

N/A: Not Available

Sources: BAAQMD, Air Quality Annual Summaries, 1985-1993

occasionally have approached the first stage Health Advisory Level (0.2 parts per million). Analysis of ozone concentrations trends over the past 20 years, however, indicates that even one occurrence of a Health Advisory Level of ozone is improbable in any given year. As shown in Table 5F-1, San Jose at the Fourth Street Station exceeded the ozone standard for all the years shown, i.e., 1985-1993. However, the exceedance days declined from 12 to 3 days.

Carbon Monoxide

CO standards are occasionally exceeded in the Santa Clara Valley. There were 16 excesses of the eight-hour average CO standard in 1985, most of them during mid-winter evenings. As shown in Table 5F-1, recent trends have been toward decreased days of CO violations in the Santa Clara Valley. There were no recorded exceedances of the standard in 1992 or 1993.

Suspended Particulate Matter

The station on Fourth Street in San Jose recorded two values above the minimal 150 micrograms/cubic meter 24-hour PM₁₀ standard during 1985, and had annual averages near 50 micrograms/cubic meter. BAAQMD analysts attributed the high readings in San Jose to the massive downtown redevelopment program, with demolition, construction, street repairs, traffic detours, etc. No other Bay Area monitoring sites showed PM₁₀ exceeding the new national standards. More recent data show the San Jose station substantially below the national standard and slightly below the state standard level of 30 micrograms/cubic meter for the 1990-1993 reporting period.

Clean Air Plan

The California Clean Air Act of 1988 (CCAA) requires each local air district that does not meeting state air quality standards to produce a plan that will show how emissions reductions will be achieved, and if possible standards met. The Bay Area '91 Clean Air Plan (CAP) was adopted by the Board of Directors of the Bay Area Air Quality Management District (BAAQMD) in October 1991 in response to the CCAA requirement. The plan was prepared by the BAAQMD in cooperation with the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG). The implementation of the '91 Clean Air Plan will insure the carbon monoxide standards are attained by about 1995. Ozone precursors, reactive organics and oxides of nitrogen are expected to be reduced by 4% per year and 2.6% a year, respectively.

The strategy of the '91 CAP builds upon the statewide motor vehicle control requirements and includes:

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- More stringent controls on polluting industries and businesses;
- Reformulation of paints, varnishes, and consumer products to reduce volatile pollutant content;
- Programs to reduce automobile use, to reduce traffic congestion, and to improve mobility; and
- Programs to identify and repair highly polluting and "smoking" vehicles.

The CCAA requires that the BAAQMD develop, adopt, and implement all "reasonably available" transportation control measures (TCM). The legislature defined TCMs as "any strategy to reduce automobile trips, vehicle use, vehicle miles traveled, vehicle idling, or traffic congestion for purposes of reducing motor vehicle emissions." Implementation and enforcement of TCMs would be delegated to local jurisdictions, such as the cities and County government of Santa Clara County³.

Conformity with the Federal Clean Air Act

Motor vehicles are the single largest source of pollution in Santa Clara County and indeed the Bay Area. Consequently, transportation plans and programs are important in determining existing and future air quality conditions. The federal Clean Air Act Amendments of 1990 and the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) created a new mobility and air quality planning environment wherein transportation improvements need to show that they are in conformity with the air pollution reduction goals of the Air Quality Plan. The pollution reduction goals are expressed in the State Implementation Plan (SIP) for the Clean Air Act. For the Bay Area, the SIP is the 1982 Air Quality Plan. The SIP is based on an air quality assessment of projects that have the potential to cause air pollution, and recommends measures to offset it. If a project is not in conformity with this plan and has the potential to adversely affect air quality, federal funding for the projects will not be forthcoming.

The T2010 Plan discussed in detail in the Transportation section of this EIR is the comprehensive transportation plan for the County. Its EIR notes that a conformity analysis was not done for the T2010 projects but that, as a part of the Transportation Improvement Program (TIP) for the region, its effects on air quality were evaluated by MTC. The EIR notes: *... if it were found that a transportation plan...of Santa Clara County would cause increased emissions within the County but that the increases would be negated by offsetting reductions of emissions in upwind counties, then the County's plan could be found to be part of a larger conforming plan for the Bay area. The MTC's RTP is such a plan.*⁴

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The Metropolitan Transportation Commission (MTC) which is responsible for the TIP prepared a conformity analysis that determined the 1992-1996 TIP conforms with the SIP.⁵ MTC is required to review its TIP annually for conformity with the Air Quality Plan.

Future Air Quality

Future air quality improvement within Santa Clara County and throughout the Bay Area will be dependent on reducing the total volume of automobile emissions and reducing the cumulative emissions from a multitude of individual, small scale air pollution sources (e.g. barbecues, paints, and solvents).

Automobile emissions account for 80%-90% of the CO pollution and a majority of the other pollutants. Reducing automobile emissions can be accomplished by two basic approaches: 1) reducing the level of emissions from individual vehicles; and, 2) reducing the total number of vehicle miles driven. The total number of vehicle miles driven is largely a function of land use patterns and usage of public transportation.

Better land use planning can help reduce the need for long distance commuting and make commuting via public transportation more convenient and feasible, thus reducing total automobile exhaust emissions.⁶

Sensitive Receptors

Land uses such as schools, hospitals, and convalescent homes are considered to be relatively sensitive to poor air quality because the young, the old, and the infirm are more susceptible to respiratory infections and other air-quality-related health problems than the general public. Agricultural crops, especially broad-leaved produce crops and cultivated flowers, are also sensitive to air pollutants such as ozone, nitrogen oxides, and sulfur dioxide.

Residential districts are sensitive to air pollutants because people, including the young and old, are at home for extended periods so exposure periods are long. Industrial and commercial districts are less sensitive to poor air quality because exposure periods are shorter and workers in these districts are, in general, the healthiest segment of the public. Recreational land uses are moderately sensitive to air pollution because, although exposure periods are generally short, vigorous exercise associated with recreation places a high demand on the human respiratory functions, which air pollution can impair. Noticeable air pollution also detracts from the recreational experience.

Draft 1994 General Plan Strategies

The Draft 1994 General Plan recommends that the cities and County of Santa Clara adopt and pursue the following overall strategies in order to maintain progress in air quality and to help implement the '91 Clean Air Plan adopted by the Bay Area Air Quality Management District:

- Strategy 1: Augmented growth management, land use, and development policies that help achieve air quality standards.*
- Strategy 2: Transit systems that provide feasible travel options.*
- Strategy 3: Increased travel demand management and traffic congestion relief.*
- Strategy 4: Particulate and small scale emission controls.*

The countywide strategies, policies and implementation measures for air quality integrate concerns for growth management, housing, transportation and public health. The Rural Unincorporated Area Health and Safety chapter of the Draft 1994 General Plan notes that the rural densities imposed by the Plan do not encourage significant traffic volumes or industrial point source emitters. Rather, the rural area's sources of air pollution are particulates such as dust, ash and smoke. Agricultural burning, quarry operations and land cultivation as well as odors are air quality problems in the rural unincorporated area. Of these, crop burning has the greatest effect and is subject to BAAQMD's "No Burn Days" regulation.

The strategies and policy directions of the Draft 1994 General Plan regarding air quality for the rural unincorporated areas reflect current policies and strategies contained in various countywide chapters of the plan, such as Growth & Development, Transportation, Resource Conservation, and Health & Safety. There are no Rural Unincorporated Policies regarding air quality. Listed briefly in summary, these strategies are to:

- *maintain existing urban development policies and to promote corollary policies encouraging compact urban development;*
- *support the development of feasible transportation alternatives to automobile dependence, such as transit, ride-sharing, and telecommuting;*
- *limit the intrusion of residential and other land uses incompatible with agriculture, mineral extraction and other resource-related land uses prescribed for the rural unincorporated areas;*

- *provide public transit to users of the County's regional park and trail system, generally located within the rural area; and,*
- *encourage rural area residents and businesses to voluntarily reduce or defer activities that could have air quality impacts when it will not interfere with or burden them by doing so.*

Policies and Regulations

A. Plan Policies that Foster Environmental Protection

This section of the EIR discusses existing air quality policies, ordinances and regulations in the County that serve to protect the rural unincorporated environment. It begins with policies of the 1980 General Plan that are carried forward to the Draft 1994 General Plan, particularly those that protect the quality of the air. The next section continues with a discussion of substantive policy revisions in the Draft 1994 General Plan that are intended to strengthen environmental protection. It is followed by a discussion of other ordinances and regulations implemented by the County or other levels of government to guide growth in an environmentally sound manner. This body of controls provide comprehensive tools to maintain and improve air quality in the rural unincorporated area and the County as a whole.

Policies from the 1980 General Plan

Air quality in Santa Clara County is a region-wide problem and policies in the Growth and Development chapter of the Plan include balanced urban growth polices such as urban development only within cities [C-GD 1-3], improving housing supply in proximity to employment areas to reduce commuting distances and allowing only low density development outside the urban areas of the County [C-GD 38-40].

Substantive Policy Changes in the Draft 1994 General Plan

Countywide policies (C-HS 5-9) promote compact urban form to discourage auto-dependency, supports long-term Urban Growth Boundaries, encourages cities' land use plans to encourage transit-oriented land use, and redesignation of land uses to improve the jobs-housing balance. Congestion management and improved transit systems should be supported to provide feasible alternatives to automobile use, employer based ridesharing and travel demand management (TDM) should be encouraged to reduce trips as well as congestion.

Rural areas polices (R-TR 6, 7) promote carpooling and other commute alternatives for rural

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unincorporated residents as well as providing for the non-motorized circulation needs of these rural residents.

B. Ordinances and Regulations that Reduce Impacts

Grading Ordinance: The Grading Ordinance contains provisions for erosion and dust control which are described in detail in the Geology section of this EIR, Chapter 5K.

Zoning Ordinance: The Zoning Ordinance, Section 47-5(d) regarding use permit findings requires control of odor and dust.

C. Significance Criteria

CEQA *Supplementary Document G (x)* states that a project will normally have a significant effect on the environment if it will:

- cause a violation of any ambient air quality standard;
- contribute substantially to an existing or projected air quality violation;
- expose sensitive receptors to substantial air pollutant concentrations;
- or conflict with established plans, policies, or regulations of air pollutants. "

An air quality conformity analysis of the Draft 1994 General Plan is not required as there are no federal funds allocated to the Draft 1994 General Plan.

Impacts and Mitigations

Impact 1. Construction Impacts on Air Quality. Construction activities associated with growth under the Plan would contribute to air pollution associated with increased levels of PM₁₀ and NOx. Heavy construction generates PM₁₀ emissions that can have a substantial temporary impact on local air quality. Dust emissions from construction and earthmoving under the Plan would vary substantially from day to day depending on the level of construction activity, the specific operations, and the prevailing weather. Impacts from specific projects would be analyzed when specific plans or projects are proposed. Potential violations of the PM₁₀ standard

would be mitigated through the implementation of the Grading Ordinance and Zoning Ordinance procedures. *This would be a less than significant impact.*

Mitigation Measure: No further mitigation is required.

Impact 2. Long-term Emissions from Motor Vehicles. Emissions of criteria air pollutants associated with development under the Draft 1994 General Plan would mainly result from increased vehicle trips. The amount of development projected by the Plan is small and the growth would be mostly in the Rural Residential area. Growth would include 400 residences on new subdivided parcels and 2,400 new units on existing lots of record, for a total of 2,800 new residential units under the Plan. Assuming ten trips per unit per day, a total of 28,000 trips would be generated by residential development by 2010. This would be 1,867 new vehicle trips per year. Although 137 new non-residential projects are expected by 2010, it is not known how many jobs this would entail. As the rural unincorporated areas is expected to see a drop in employment, the net effect of job growth associated with new non-residential development is assumed to be zero.

Plan policies to encourage non-motorized circulation, carpooling and other commute alternatives for rural unincorporated area residents [R-TR 6-7] would reduce automobile dependency and vehicle trips. Support for employer-based ridesharing would also reduce vehicle trips [C-HS 8-9]. Most of the traffic congestion and motor vehicle traffic occurs in the urbanized portions of the County and along the 101 corridor. However, the EIR on the T2010 Santa Clara County Transportation Plan states: "According to estimates, emissions within the South County areas would not be increased, in spite of greater growth in travel demand in that portion of the County."⁷ Based on the T2010 EIR, no adverse air quality impacts are projected over the next 20 years for the rural unincorporated area of Santa Clara County. *Long-term emissions from motor vehicles associated with growth under the Draft 1994 General Plan is a less than significant impact.*

Mitigation Measure: No further mitigation is required.

Impact 3. Consistency with the Clean Air Plan. The population and employment growth associated with development under the Draft 1994 General Plan are generally consistent with the employment and population projections used for the *91 Clean Air Plan* ('91 CAP). In order for the Draft 1994 General Plan to be consistent with the '91 CAP, its population and employment projections need to be consistent with population and employment projections made by ABAG. To approximate the rural unincorporated area, ABAG analyzes the "remainder" portion of the County which is defined as the area that includes the unincorporated communities and rural areas outside the cities' spheres of influence. The growth projections for this EIR are based on growth in the

"remainder" plus the area in the cities' spheres of influence that have not been annexed. Thus, the area examined in the EIR is greater than the area used by ABAG. The population projections are, therefore, slightly larger than for the "remainder" area. ABAG population figures for the "remainder" of the County projects 8,258 new residents between 1990 and 2010.⁸ Projections under the Draft 1994 General Plan for new residential subdivisions and the existing lots of record estimate an increase in population of about 8,204 residents. Since this figure includes a larger geographic area than the ABAG projection, and since the population projections are so close to the ABAG projections, population and employment generated by the Plan are considered consistent with the '91 CAP.

Employment figures for the ABAG "remainder" area (that area outside the USA and spheres of influence) would decline by 180 jobs, according to Projections '94. While jobs have not been projected under the Draft 1994 General Plan, there are no major employment centers expected in the rural unincorporated area. As cities expand into unincorporated area, the non-residential projects projected under the Draft 1994 General Plan are not expected to result in net new employment in the rural unincorporated areas. It can be assumed, therefore, that these rural unincorporated areas would not accommodate employment growth beyond that projected by ABAG. *As the Draft 1994 General Plan would be consistent with the Clean Air Plan, this is a less than significant impact.*

Mitigation Measure : No further mitigation is required.

Impact 4. Odors. Development under the Plan could result in areas affected by odorous pollutants primarily from stationary sources associated with agricultural or industrial processes. Odorous pollutants are not expected to contribute significantly to regional or local air quality problems. There are no records of odor complaints by residents on file with the County. However, any odor complaints are investigated by the County's Department of Environmental Health which makes recommendations to eliminate the possible nuisance. Odorous substances are regulated directly by the BAAQMD through a policy for handling citizen complaints. The BAAQMD has a well-defined procedure which includes collection and evaluation of air samples and a violation penalty procedure

designed to respond to public odor complaints. *Odorous emission would be a less than significant impact.*

Mitigation Measure : No further mitigation is required.

CHAPTER 5F: *Climate and Air Quality*

Impact 5. Cumulative Regional Emissions from Motor Vehicles. The Draft 1994 General Plan projects a small amount of growth in the rural unincorporated portions of the County. The T2010 Plan finds that emissions the County area would not be increased, even with the expected cumulative growth in travel demand, assuming T2010 policies and programs are implemented. The T2010 EIR analysis finds that no adverse air quality impacts are projected for future years given successful plan implementation. The principal factor affecting these projections is the progress made in vehicular emissions controls and cleaner fuels. *Thus, development under the Draft 1994 General Plan is not expected to add significantly to the cumulative air pollution in the County.*

Mitigation Measure : No further mitigation is required.

Endnotes to Climate and Air Quality Chapter

1. Bay Area Air Quality Management District, Air Quality Handbook, 1989-1990.
2. California Air Resources Board, "Attainment/Nonattainment Status," Memorandum, October 7, 1985.
3. Association of Bay Area Governments, Bay Area Air Quality Management District, and Metropolitan Transportation Commission, 1991, 1991 Clean Air Plan for the Bay Area.
4. T2010 Final EIR, p. 95.
5. MTC, The Air Quality Assessment for the TIP (Volume 3), p. III-49.
6. Santa Clara County Department of Planning & Development, Alternative Futures - Trends and Choices (Report of the County of Santa Clara Strategic Vision Steering Committee), October 1990.
7. Same as for 5. page 101.
8. Association of Bay Area Governments, Projections '92, July 1992, page 242. Projections '92 figures are cited here because the T2010 Plan and EIR traffic and air quality studies were based on these figures. The Housing section of the Draft 1994

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General Plan EIR uses more recent ABAG projections to estimate population increases. Projections '92 estimates that population in the "remainder" area will increase by 8,258 between 1990 and 2010. Projections '94 estimates that population will increase by 3,961 for the same period.



CHAPTER 5G HOUSING

Environmental Setting

According to the 1990 Census, Santa Clara County contained 540,240 housing units in 1990. Of this total, 35,118 units (6.5%) were located in unincorporated areas of the County. Table 5G-1 shows the number and type of housing units by city and unincorporated County area; almost half of all housing units (48%) are located in the City of San Jose. Seventy-five percent (26,211) of the housing stock in the unincorporated area consists of single-family detached residences. The unincorporated County is the second largest source of such housing, after San Jose.

In 1990, the median home price in Santa Clara County was \$230,000¹. In the Bay Area, recent studies reveal that homeowners spend 25% of their disposable income (i.e., after-tax income) on housing, indicating that housing costs exceed other high-cost areas such as New York and Washington, D.C., where homeowners spend 20% of their disposable income on housing.² Table 5G-2 shows home ownership for communities in Santa Clara County.

The County faces an "imbalanced housing supply," in which:

- **The need for housing exceeds supply in the County as a whole.** With an estimated 861,000 jobs in 1990 and an average of 1.56 workers per household, the County needed approximately 12,220 more housing units than the 540,000 units it had in 1990 in order to achieve a simple jobs/housing balance and a favorable vacancy rate.³ According to the Association of Bay Area Governments (ABAG), the unincorporated County area had an existing housing shortfall of 250 units in 1987.⁴ ABAG projects that countywide employment will increase by 98,800 jobs by 1995, but the rural areas will see a net loss of 170 jobs, suggesting that incorporated cities will experience the greatest housing need.⁵
- **Much of the housing supply is unaffordable to many County households.** County housing prices rose dramatically during the 1980s, over 114% in most cases. Personal income, although high compared to other metropolitan areas, did not keep pace, increasing by only 96%.⁶ Moreover, many of the 13,000 people who were homeless in the County in 1990 were employed in jobs that did not pay enough to cover the cost of

TABLE 5G-1
Housing Units by Type and by Location
(Santa Clara County, 1990)

Jurisdiction	Total	Type of Housing Unit				
		Single-Family, Detached	Single-Family, Attached ¹	Multi-Family ²	Mobile Homes	Other
Unincorporated	35,118	26,211	1,642	4,994	948	1,323
Campbell	15,860	6,559	1,870	6,870	397	164
Cupertino	16,055	9,454	2,150	4,335	7	109
Gilroy	9,767	5,992	629	2,699	369	78
Los Altos	10,107	9,051	331	662	3	60
Los Altos Hills	2,682	2,623	24	7	4	24
Los Gatos	11,822	6,800	1,723	3,006	149	144
Milpitas	14,465	9,733	1,710	2,337	573	112
Monte Sereno	1,190	1,167	15	3	1	4
Morgan Hill	8,157	5,003	958	1,299	852	45
Mountain View	31,487	8,550	3,793	17,565	1,189	390
Palo Alto	25,188	15,245	1,008	8,523	113	299
San Jose	259,365	150,207	24,729	70,105	11,743	2,581
Santa Clara	37,873	16,838	3,059	17,230	352	394
Saratoga	10,315	9,214	483	527	5	86
Sunnyvale	50,789	20,565	3,544	22,055	4,221	404
TOTAL	540,240	303,212	47,668	162,217	20,926	6,217

Table Notes: 1 = "Single-Family, Attached" units, sometimes referred to as "town houses," share a ground-to roof wall with adjoining structures.

2 = "Multi-Family" includes structures of two or more dwelling units.

Source: U.S. Census Bureau, 1990 Census, STF-3A, in *Statistical Profiles of Santa Clara County, Based on the 1990 Census*, Santa Clara County Planning Office, October 1992.

TABLE 5G-2
Housing Ownership and Tenure by Location
(Santa Clara County, 1990)

Jurisdiction	Total Units	Owner-Occupied	Renter-Occupied	Vacant
Unincorporated	35,118	22,053	11,860	1,205
Campbell	15,860	7,199	8,107	554
Cupertino	16,055	9,671	5,687	697
Gilroy	9,767	5,404	4,108	255
Los Altos	10,107	8,640	1,197	270
Los Altos Hills	2,682	2,455	151	76
Los Gatos	11,822	7,240	4,033	549
Milpitas	14,465	9,814	4,285	366
Monte Sereno	1,190	1,076	87	27
Morgan Hill	8,157	5,583	2,225	349
Mountain View	31,487	11,322	18,668	1,497
Palo Alto	25,188	13,735	10,471	982
San Jose	259,365	153,357	96,861	9,147
Santa Clara	37,873	17,202	19,343	1,328
Saratoga	10,315	8,988	1,062	265
Sunnyvale	50,789	23,615	24,681	2,493
TOTAL	540,240	307,354	212,826	20,060

Source: U.S. Census Bureau, 1990 Census, STF-3A, in Statistical Profiles of Santa Clara County, Based on the 1990 Census, Santa Clara County Planning Office, October 1992.

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housing. According to the County's 1993 Housing Element Update, over one-third of all rural area households in 1980 were paying over 25% of their income for housing, thereby exceeding the U.S. Department of Housing and Urban Development's standard for housing affordability.⁷

- **Most housing is far removed from employment centers, services, recreational opportunities, and transportation alternatives to the automobile.** The majority of jobs are located in the northern part of the County, while housing predominates in the central and South County areas. As a result, not enough housing is located close to employment centers.⁸

Housing construction declined during the 1980s: average annual production, which reached 12,600 units during the 1970s, dropped to about half that amount, approximately 6,700, each year during the 1980s.⁹ The median cost of a single-family home in the County grew by \$132,300 between 1980 and 1990, exceeding the statewide increase of \$96,770. Moreover, because development patterns were largely set during the 1960s and 1970s, more recent efforts to correct the locational imbalance of jobs and housing have been only marginally successful. During the 1980s, housing policies in most communities focused on achieving a numerical balance between housing units and employment based on an average number of employed residents per household. This approach does not address housing affordability or the needs of senior, student, and unemployed households.¹⁰

ABAG Housing Need Determinations

The ABAG Housing Needs Determinations Report, released in September 1988, forecast the 1990-95 housing needs for the entire Bay Area (see Table 5G-3). The forecasts consisted of three primary components:¹¹

- **"Existing Need,"** expressed by the number of housing units needed to achieve the optimal vacancy rate on January 1, 1988;
- **"Projected Need,"** or the number of housing units needed to accommodate projected household growth between 1988 and 1995 at the optimal vacancy rate; and
- **"Additional Housing to be Derived from Alternative Zoning Scenario,"** a target regional measure for the number of housing units needed, defined as the number of units necessary to house up to 50% of the workers who must currently commute from the jurisdictions where they live to the jurisdictions where they work.

<p align="center">TABLE 5G-3 Existing and Projected Housing Needs, 1987-1995 (Unincorporated Santa Clara County)</p>			
Existing Need	Projected Need, 1988-90	Projected Need, 1990-95	Total
250	64	231	545
<p>Table Note: No "alternative zoning" units are projected for Santa Clara County.</p> <p>Source: <i>Association of Bay Area Governments and Santa Clara County Planning Office, 1990</i></p>			

Having considered these three components, ABAG identified projected housing needs for the 1987-1995 period in unincorporated Santa Clara County, as shown in Table 5G-3. In order to assess more accurately the housing need for all income groups, ABAG projected housing need based on income distributions derived from the 1980 Census. Income distribution figures were determined by averaging unincorporated area household income figures with those of Santa Clara County as a whole, in order to characterize more accurately regional housing demand. Table 5G-4 shows the number of housing units needed in each of four income categories: Above moderate, moderate, low, and very low.

Since the time that these projections were released, housing development in the unincorporated area has continued. During 1988 and 1989, 443 single-family dwelling units, 29 multi-family units, and 20 secondary dwelling units were constructed in unincorporated areas. Table 5G-5 shows the adjusted projected housing need for the 1988-1995 period, based on the type, number, and cost of the units added to the housing stock since 1987.

Future Housing Development

As discussed in the Chapter 5A, Land Use, County records indicate that Agriculture, Hillside, and Rural Residential areas saw the greatest amount of subdivision activity during the 1980s and early 1990s. Of a total of 374 parcels created by subdivision, 156 (42%) here in the Rural Residential area, 93 (25%) in the Hillside area 69 (18%) in the Agriculture area. Each parcel is assumed to be developed with one unit. New single-family residential building permits totaled 2,241, as shown in Table 5A-2. This growth was concentrated primarily in the North Valley

TABLE 5G-4
Housing Needs by Income Category, 1988-1995
 (Unincorporated Santa Clara County)

Income Category	Units Needed Annually	Total Units Needed
Above Moderate (44%)	48	240
Moderate (21%)	23	114
Low (15%)	16	82
Very Low (20%)	22	109
TOTAL (100%):	109	545

Source: Association of Bay Area Governments and Santa Clara County Planning Office, 1990

TABLE 5G-5
Adjusted Housing Needs by Income Category, 1988-1995
 (Unincorporated Santa Clara County)

Income Category	Projected Need	Constructed, 1988-1989	Adjusted Need
Above Moderate	240	443	0
Moderate	114	0	114
Low	82	10	72
Very Low	109	39	70
TOTAL:	545	492	256

Source: Association of Bay Area Governments and Santa Clara County Planning Office, 1990

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(536 permits, 24% of all) and surrounding Santa Cruz Mountains (642 permits, 29%) and San Jose foothills (256 permits, 11%), with a substantial amount of new development occurring in the South Valley in the vicinity of Morgan Hill (276 permits, 12%), Gilroy (147 permits, 7%), and San Martin (170 permits 8%).¹² These areas are likely to be the location of most future housing development in the unincorporated area. It is important to note, however, that the population of unincorporated areas of the County actually declined by 22,000 during the period from 1980 to 1990, due to annexation of unincorporated lands to cities.¹³

As indicated in Land Use Chapter 5A, the County issued an average of approximately 160 building permits per year for single-family residential construction during the period from 1980 to 1993. If this rate of growth were to continue over the next 15 years, a total of approximately 2,400 new single-family houses would be constructed in the unincorporated area. As shown in Table 5A-8, 400 new subdivided parcels, each supporting one dwelling unit, and 2,400 single family building permits in existing lots of record results in 2,800 dwelling units over the life of the Draft 1994 General Plan.

Table 5G-6 shows the projected increases in population and number of households countywide and in unincorporated areas for the period 1990 to 2010. As indicated in the table, the net population increase of the unincorporated area outside the cities' sphere of influence is projected by ABAG to grow by approximately 3,961 persons during this period, creating approximately 1,359 new households. This level of new household growth can be accommodated by the housing increase expected over the 15 year life of the plan.

Assuming year 2010 household size of 2.93 persons,¹⁴ a population of 8,204 will be accommodated in the projected housing. According to the 1993 Santa Clara County Housing Element Update, in the unincorporated area *comparisons between income affordability levels and rents and sales prices indicate that the unassisted-housing market will continue to meet the needs of most moderate and all above moderate income unincorporated areas households. However, it would appear unlikely that the housing affordable to most Very Low, Low, and some Moderate income households will occur without some form of assistance.*¹⁵

Another trend affecting future housing conditions in the unincorporated area is the increasing use of recreational vehicle (RV) parks as places of long-term residence. RV parks have historically served as overnight or short-term stay facilities for tourists and other travelers visiting or passing through the County. Recent changes in state law, however, have essentially prohibited local jurisdictions from limiting the maximum length of visitor stay. Consequently, RV parks are becoming, at least in part, long-term residential areas for retirees and low-income households, including families with children. The application of existing County RV park design guidelines and ordinances to proposed RV parks could allow as many as 12 to 18 RVs per acre. This far

TABLE 5G-6
Projected Population and Household Growth, 1990-2010
 (Countywide and Unincorporated Area)

	1990	Projections				Increase 1990-2010	% Increase 1990-2010
		1995	2000	2005	2010		
<i>Countywide</i>							
Population	1,497,577	1,606,600	1,689,600	1,770,600	1,813,100	315,523	21%
Number of Households	520,180	543,570	576,010	606,150	629,600	109,420	21%
<i>Unincorporated Area</i>							
Population	15,339	16,900	17,800	18,900	19,300	3,961	26%
Number of Households	4,951	5,250	5,640	6,100	6,310	1,359	27%

Source: Santa Clara County Planning Office; Association of Bay Area Governments' Projections 84

exceeds the residential densities of all land use designations for the rural unincorporated area, as five acre average minimum parcel size is the lowest allowed for the Rural Residential areas. Due to their changing nature, RV parks in rural areas are becoming similar in some respects to higher density residential areas.¹⁶

Draft 1994 General Plan Strategies

Housing strategies for the rural unincorporated area include the following:

Strategy 1: Maintain and expand special needs housing in the rural unincorporated area.

Strategy 2: Maintain and expand the supply of farm worker housing in the rural unincorporated area.

Policies and Regulations

A. Plan Policies that Foster Environmental Protection

This section of the EIR discusses the existing policies, ordinances and regulations in the County that serve to protect the rural unincorporated environment. The 1980 General Plan policies relating to housing were incorporated into the Draft 1994 General Plan without substantial changes or additions. The Draft 1994 General Plan also includes a discussion of other ordinances and regulations implemented in the County to minimize housing conflicts.

Policies from the 1980 General Plan

The supply and diversity of housing within the urban area should be commensurate with employment, infrastructure, and environmental protection standards. (Policy C-HG 1). Urban density housing may only occur within cities, not the rural unincorporated areas. (Policy C-HG 2). Intergovernmental cooperation and public/private partnerships are encouraged to achieve adequate housing supply. (Policy C-HG 6). Affordable housing for low and moderate income households not provided by the private market should be provided by local government financial assistance programs, and federal and state assistance programs. (Policy C-HG 7). Funds generated from local programs for housing assistance shall be targeted for households earning less than 80% of the County median for all households, with an emphasis on those earning under 50%. (Policy C-HG 8). Fiscal barriers to affordable housing supply should be removed. (Policy C-HG 9). Housing discrimination shall be eliminated in the County, housing laws shall be augmented and enforced to protect against unwarranted housing discrimination, fair housing

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services shall be available in all parts of County, and opportunities for mediation of disputes between tenants and landlords shall be provided. (Policy C-HG 10-13). Special needs housing, particularly emergency housing, housing for families with children, and the elderly should be increased throughout the County. (Policy C-HG 14-16). Each community shall act to preserve rental housing from unwarranted conversion to owner-occupied housing, from demolition, or conversion to non-residential uses. (Policy C-HG 17-18). Rehabilitation of aging housing stock should be encouraged while maintaining the affordability of such units. (Policy C-HG 20-21).

Substantive Policy Changes in the Draft 1994 General Plan

Review city and County land use and development procedures on a continual basis to remove unnecessary constraints to construction of affordable housing. (Policy C-HG 4). The highest priority in housing assistance programs shall be affordable, special needs housing. (Policy C-HG 13). The County and cities should seek optimal balance between the objectives of preserving and restoring historic areas and maintaining the available low cost housing supply. (Policy C-HG 19). The County shall maintain and expand where feasible the supply of special needs housing in rural unincorporated areas. (Policy R-HG 1). The County shall promote a suitably located and affordable farm worker housing supply. (Policy R-HG 2).

B. Ordinances and Regulations that Reduce Impacts

Santa Clara County completed an update to the Housing Element in 1990 which was adopted by the Board of Supervisors in 1993. The element was reviewed by and received approval from the State of California Housing and Community Development (HCD) Department.

C. Significance Criteria

The CEQA Guidelines do not have specific criteria regarding housing impacts. Related criteria from *Supplementary Document G (k)* includes the following: *A project will normally have a significant effect on the environment if it would induce substantial growth or concentration of population.* For purposes of the EIR, there would be significant housing impacts if the General Plan did not provide for Santa Clara County's reasonable fair share of needed housing and affordable housing.

Impacts and Mitigations

Impact 1. Jobs/Housing Imbalance. 1990 U.S. Census indicates that there are a total of 35,118 housing units in rural unincorporated areas. (see Table 5G-1) The Land Use chapter of this EIR projects the number of new dwelling units that would be created over the 15-year life of the Draft General Plan at 2,800 dwelling units.¹⁷ Most of these units will be scattered single-family dwellings. This number of units can accommodate a population 8,204, using ABAG's projected household size for 2010 of 2.93 persons. Most of these workers will be employed in urban areas.

For job growth, this EIR relies on ABAG Projections '94 which predicts a 180-job decline for Santa Clara County lands outside cities and their spheres of influence. This area is smaller in size than the unincorporated area of the County, but it is the only area for which there are employment projections. This compares to an estimated 1,600 residential units that would be built and remain in the rural unincorporated area over the 15-year time horizon of the Draft 1994 General Plan.¹⁸

With the exception of policies to enhance agriculture-related jobs, the Draft 1994 General Plan does not encourage job-generating uses in the rural unincorporated area. Agriculture and grazing by their nature require large tracks of land and have an extremely low employment density. If typical employment facilities such as offices or industrial plants encroached upon agriculture and grazing lands, the long-term viability of the latter would be impaired. The fact that there would be substantially more homes than jobs is greatly influenced by development of the existing lots of record, over which the County has no control. If only new subdivisions parcels created through County approval are considered, the job/housing balance improves to -180 jobs and 400 dwellings. This is a very small imbalance from a quantitative perspective.

The Draft 1994 General Plan contains policies and implementation recommendations which address the jobs/housing balance. These include implementation recommendations R-HG (i) 3, which encourages public support of city efforts to create a balanced housing supply; and C-HG (i) 7, which recommends an annual assessment of employment trends and housing needs followed by an evaluation of countywide housing efforts so as to determine their effectiveness. Housing affordability is addressed in Impact 3 below.

It should be noted, finally, that a jobs/housing imbalance is not an impact in itself. Rather, it is an indicator of impacts from related traffic, air pollution, noise, demand for public services and other issues. Specific impacts and mitigation measures for these issues are discussed throughout this EIR. *The secondary effects (i.e., traffic, noise, air quality) of the jobs/housing ratio resulting from the subdivision parcels under County control do not indicate the potential for significant impacts over the 15-year life of the Draft 1994 General Plan.*

Mitigation Measure: No further mitigation required other than implementation of General Plan housing policies.

Impact 2. Housing Density. The major land use designations for the rural unincorporated area are Hillside (H), with a density of 20-160 acres per dwelling unit; Rural Residential (RR), with a density of 5-20 acres per dwelling unit; Agriculture (A), with a density of 20-40 acre per dwelling unit; and Ranchlands (R) with a density of 20-160 acres per unit. With the exception of the RR area, these minimum parcel sizes were not established to serve housing needs, but rather to enhance and maintain agriculture and ranching. Thus, the economic base (farming and grazing) and environmental conditions, especially slope, of the rural unincorporated area dictate the minimum parcel size. As property owners have a right to build a home on legal parcels, these parcels sizes result in the very low density development pattern in the County. This results in housing located far from employment centers, public services, recreational opportunities, and major transportation routes and alternatives. Although very low density housing is recognized as causing impacts related to the above issues, the scale at which this would occur is very small according to the projection of 400 new subdivided parcels over 15 years. The Draft 1994 General Plan seeks to reduce the spread of low density housing by constraining the expansion of Rural Residential areas. *The small amount of low density housing that would be created under the Plan would not cause significant impacts.*

Mitigation Measure: No further mitigation is required.

Impact 3. Housing Affordability. The 1990 median family income for a family of four in the unincorporated area was estimated to be about \$54,000, slightly higher than the Bay Area median.¹⁹ The 1993 Housing Element Update states that despite income growth over the past decade, an estimated 30-35% of households fall into the low and very low income categories. It can be anticipated that this figure, or

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one relatively close to it, applies to the rural unincorporated area. Based on County income levels, the housing need for the rural unincorporated area for the 1987-1995 period was estimated at 545 units (see Table 5G-3). This is broken down by income group in Table 5G-4, which indicates a need for 109 units of very low income housing, 82 units of low income housing and 114 units of moderate income housing. Table 5G-5 shows the housing that was constructed to meet this need. Of the 492 units built through 1989, the vast majority, some 443 units, were affordable by households with above moderate income. Only 39 units were affordable to very low income families and 10 were affordable to low income families.

Under the Draft 1994 General Plan, the majority of housing that would be built is market-rate, low density residential subdivisions which is characteristically affordable by higher income families. Low density single-family residences can be expected on newly subdivided parcels; these are not expected to meet affordable housing needs. Single-family houses built on existing lots of record are not likely to meet affordable housing needs, either.

Because a majority of the viable agriculture and related industries are located in rural unincorporated areas, the need for affordable farm worker housing (both year-round and migrant) is substantial. According to the 1993 Housing Element Update, most farm workers and their families, migrant and resident alike, occupy the least expensive rental housing they can find. The rural unincorporated area housing strategies focus on maintaining affordable, special need, and farm worker housing opportunities rather than market-rate housing.

The Draft General Plan includes a strategy to maintain and expand the supply of farm worker housing in the rural unincorporated area. Policy R-HG 2 states that in order to contribute to the long-term viability of agriculture, the County shall promote and support programs which maintain and expand appropriately located housing suitable for and affordable to farm worker households. Related implementation recommendations promote the establishment of "fast track" services for the development of farm worker housing.

Recent legislation regarding the length of stay in RV parks afford an interim opportunity for the County to provide needed affordable rural housing. Policies LU31-33 and LU84-86, discussed in the Land Use section of this EIR, require that RV parks be reviewed with the understanding that they might be used for long-term housing. Although RV parks are generally higher density than the

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underlying land use designation allows and may result in traffic, noise and other impacts, they provide transient affordable housing until more affordable long-term housing can be secured. RV parks are not an adequate or preferable substitute for affordable permanent housing because they usually lack full services and/or are difficult to serve.

The County has endeavored to meet its affordable housing needs with implementation programs described in the 1993 Housing Element. These programs are intended to serve countywide needs, and be implemented between 1990 and 1995 in achieving its housing goals. They involve construction projects as well as services to assist the homeless countywide.

The County administers the Mortgage Revenue Bond and Mortgage and Mortgage Credit Certificate Programs, underwriting 80% of housing bond programs and 100% of the Mortgage Credit Certificate program with its bonding authority and administrative resources. The County also administers the CDBD Program and other programs funded by the Federal Department of Housing and Urban Development (HUD) for all the unincorporated areas of the County. It administers block grant programs of several smaller cities through the Urban County Community Development Block Grant Program, a consortium of ten non-entitlement cities and the County. CDBG funds are channeled through the County's Housing and Community Development (HCD) to assist the cities in their affordable housing efforts.

The Santa Clara County Housing Authority intends to continue seeking state funding for the Arturo Ochoa Center which provides seasonal housing and day care facilities for migrant farm worker families whose permanent residence is over 50 miles away and whose income is derived at least 50% from agriculture-related employment. The Draft 1994 General Plan and the 1993 Housing Element include sufficient policies to encourage and support affordable housing. *There would be no significant impact if the County provides affordable housing to meet projected needs.*

Mitigation Measure: No further mitigation is needed if the County implements the affordable housing policies of the Draft 1994 General Plan and the 1993 Housing Element.

Impact 4. Special Needs Housing. Large families, the elderly, female-headed households, households with disabled persons, and the homeless all require special needs housing. Policy R-HG-1 addresses the issue of affordability of special need housing by requiring the County to maintain and, where feasible, expand the supply of special needs housing. Related implementation recommendations include using funding sources for rehabilitation of moderate and low income households; seeking state and federal aid for special needs housing not provided through the private market; and providing for the healthy, legal and safe maintenance of dwelling units. *There would be no significant impact if the County implements policies and programs to provide special needs housing.*

Mitigation Measure: No further mitigation required if the County implements policies and programs for special needs housing.

Cumulative Impacts

Impact 5. Countywide Housing Impacts. Housing supply and demand, and the ramifications of meeting that demand are discussed on a countywide basis in both the County's Housing Element Update and the Draft 1994 General Plan. The housing need for the County as a whole is 60,000 units by the year 2000 or 10,000 units per year. Half of these units need to be affordable to low and moderate income house holds earning less than the countywide median. Residential development within the rural unincorporated areas can contribute approximately 2,800 units over the 15 year life of the plan.²⁰ This would be 187 units per year or 2% of the annual countywide need. Because a majority of the land use designations of the General Plan allow only low-density residential uses, the rural unincorporated area is not likely to contribute to the supply of affordable countywide housing. High density housing, which tends to be more affordable, would be directed to the urban areas by policies of the Draft General Plan. The County, as a major recipient of Community Development Block Grants (CDBG) contributes funding toward the construction of affordable housing in the incorporated areas and USAs of cities. The affordable housing is then counted as city housing.

The Countywide Housing chapter of the Draft 1994 General Plan includes several policies which address cumulative housing impacts. These include policy C-HG 3 which recommends that the County and cities work cooperatively to ensure a

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balanced housing supply sufficient to achieve countywide economic, social, and environmental objectives; policy C-HG 4 which recommends removal of unnecessary constraints to the construction of affordable housing; policies C-HG 10-13, which address fair housing issues; and policies C-HG 13-16 which address special needs and affordable housing. The growth under the Draft 1994 General Plan is expected to help meet the cumulative housing needs of the entire County. *This would be a beneficial housing impact.*

Mitigation Measure: No further mitigation is required.

Endnotes to Housing Chapter

1. County of Santa Clara Department of Planning and Development, Draft 1994 General Plan, Countywide Housing Chapter, page E5.
2. County of Santa Clara Department of Planning and Development, Alternative Futures: Trends & Choices (Report of Santa Clara Strategic Vision Steering Committee), October 1990, page 43.
3. County of Santa Clara Department of Planning and Development, Draft 1994 General Plan, Countywide Housing Chapter, page E-5.
4. County of Santa Clara Department of Planning and Development, Draft 1994 General Plan, Countywide Housing Chapter, page E-5.
5. County of Santa Clara Planning Office, 1993 Housing Element Update, pages 63-64.
6. County of Santa Clara Department of Planning and Development, Alternative Futures: Trends & Choices (Report of Santa Clara Strategic Vision Steering Committee), October 1990, page 43.
7. County of Santa Clara Planning Office, 1993 Housing Element Update, page 56.
8. County of Santa Clara Department of Planning and Development, Draft 1994 General Plan, Countywide Housing Chapter, pages E-5 through E-7.

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9. County of Santa Clara Department of Planning and Development, Alternative Futures: Trends & Choices (Report of Santa Clara Strategic Vision Steering Committee), October 1990, page 45.
10. County of Santa Clara Department of Planning and Development, Draft 1994 General Plan, Countywide Housing Chapter, pages E-6 thru E-7.
11. County of Santa Clara Planning Office, 1993 Housing Element Update, pages 65-66.
12. The proportion of those permits located inside city USAs but under County jurisdiction is not known. (Hugh Graham, Senior Planner, Santa Clara County Planning Office)
13. Santa Clara County Planning Office, Info Sheets; U.S. Census Bureau, 1980 Census and 1990 Census, STF-1.
14. ABAG, Projections 1994, Pg. 272.
15. County of Santa Clara, Planning Office, 1993 Housing Element Update, page 62.
16. Santa Clara County General Plan Review Advisory Committee Meeting, Thursday, March 31, 1994 Agenda, Agenda Item #5.
17. This figure assumes 2,400 (2,401 rounded) single-family lots of record, plus 400 single-family subdivision lots for a total of 2,800.
18. To determine the jobs/housing balance under the Draft 1994 General Plan, it is necessary to make some adjustments to the available data. Regarding the housing growth projected in this EIR, some portion of the 2,400 units that are entitled to single-family building permits are undoubtedly located in city spheres of influence and will eventually become part of a city. For purposes of this EIR, it is assumed that half of these parcels are within city spheres. It is further assumed that all 400 units resulting from subdivision approvals remain in the rural unincorporated. Thus, the rural unincorporated County would accommodate 1,660 dwelling units over the life of the plan. $(2,400/2 = 1,200 + 400 = 1,600$ units) When the housing increase is compared to the projected loss of 180 jobs, it can be seen that the unincorporated area of the County would have a jobs/housing imbalance; that is, as jobs decline by 180, housing will increase by 1,600.

By comparison, ABAG projects that in the unincorporated County (the so called "remainder" area), employed residents will increase by 2,000 (from 7,800 to 9,800) between 1995 to 2010 (ABAG, Projections '94, page 274). With 1.56 workers per

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household for the County in 1990, 1,282 dwelling units would be needed by these 2,000 workers. This is reasonably close to the housing construction projected in this EIR. These employees will be commuting out of the unincorporated County for work because there will be no commensurate job growth for them.

19. County of Santa Clara Planning Office, 1993 Housing Element Update, page 9.
20. 2,800 units in the rural unincorporated area \div 15 year life of the General Plan = 187 units annually. 187 \div 10,000 annual countywide need = 2%.

CHAPTER 5H VISUAL/AESTHETICS

Environmental Setting

Santa Clara County can be divided into three basic landscape areas: 1) the flat bayside and valley lands that extend through the center of the County from San Francisco Bay to Gilroy; 2) the semi-arid hills of the Diablo Range to the east; and 3) the more verdant, steep-sided slopes of the Santa Cruz Mountains to the west. In the northern half of the county, the Santa Cruz Mountains and the Diablo Range form a broad basin that contains the south end of San Francisco Bay and surrounding lowlands and a gently sloped alluvial plain. The plain is approximately four to six miles wide at Palo Alto and Milpitas, but widens out to the south to become the floor of the Santa Clara Valley. In southern San Jose, the valley narrows to just a mile or two through the Coyote area, and then at Morgan Hill broadens into an approximately four-mile-wide corridor that continues through San Martin and Gilroy to the County's southern border. In all areas of the County, the edges of the valley are well defined by the steep slopes of the Diablo Range, which rise to elevations of 3,000 to 4,000 feet, and the Santa Cruz Mountains, which rise to elevations of 2,000 to 3,000 feet.¹

During the past five decades, the bayside and valley areas in the northern half of the County have undergone a dramatic transformation from rural to urban. Orchards and small communities have been transformed by extensive low density industrial, commercial, and residential development. The aesthetic character of the resulting urban environment reflects its rapid development during the height of the automobile era: densities are relatively uniform; large amounts of space are devoted to freeways, expressways, broad arterials, and parking, and commercial development is spread out along strips rather than concentrated in distinct nodes. Consequently, much of the visual interest that now exists in the bayside and northern valley areas is provided by views of the heavily forested slopes of the Santa Cruz Mountains to the west and the oak and chaparral lands on the slopes of the Diablo Range to the east, and glimpses of the natural environments that still exist in places around the bay and along the riparian corridors that extend through the valley floor.²

Within this general landscape, important natural scenic resources include the following:³

- **Hillsides and Mountains.** Hillside and mountain areas flanking both sides of the Santa Clara Valley comprise the majority of the County's open space. On the west side of the Valley, the forested Santa Cruz Mountains rise sharply to form the scenic backdrop for

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West Valley communities. Across the Valley, the rangeland, open woodlands, and wilderness areas of the Diablo Range cover the eastern half of the County.

- **Creeks and Streamsides.** Dozens of creeks and streams traverse the County, serving as scenic features in hillside and ranchland areas as well as in urbanized areas.
- **Baylands.** Undeveloped baylands at the southern tip of San Francisco Bay contain a variety of wetlands, sloughs, and salt ponds.
- **Ranchlands.** Privately-owned ranchlands can be found in remote areas east of the valley floor in the vicinity of the Diablo Range, and in the Santa Cruz Mountains foothills.
- **Agricultural Lands.** Crops, orchards, and other agricultural lands still dominate the southern portion of the County, primarily in the fertile valley floor areas south and east of Gilroy.
- **Parks.** Publicly-owned parks, including the County's regional park system, Henry Coe State Park, and the preserves of the Midpeninsula Regional Open Space District and the San Francisco Bay National Wildlife Refuge, contribute to the scenic resources of the County.

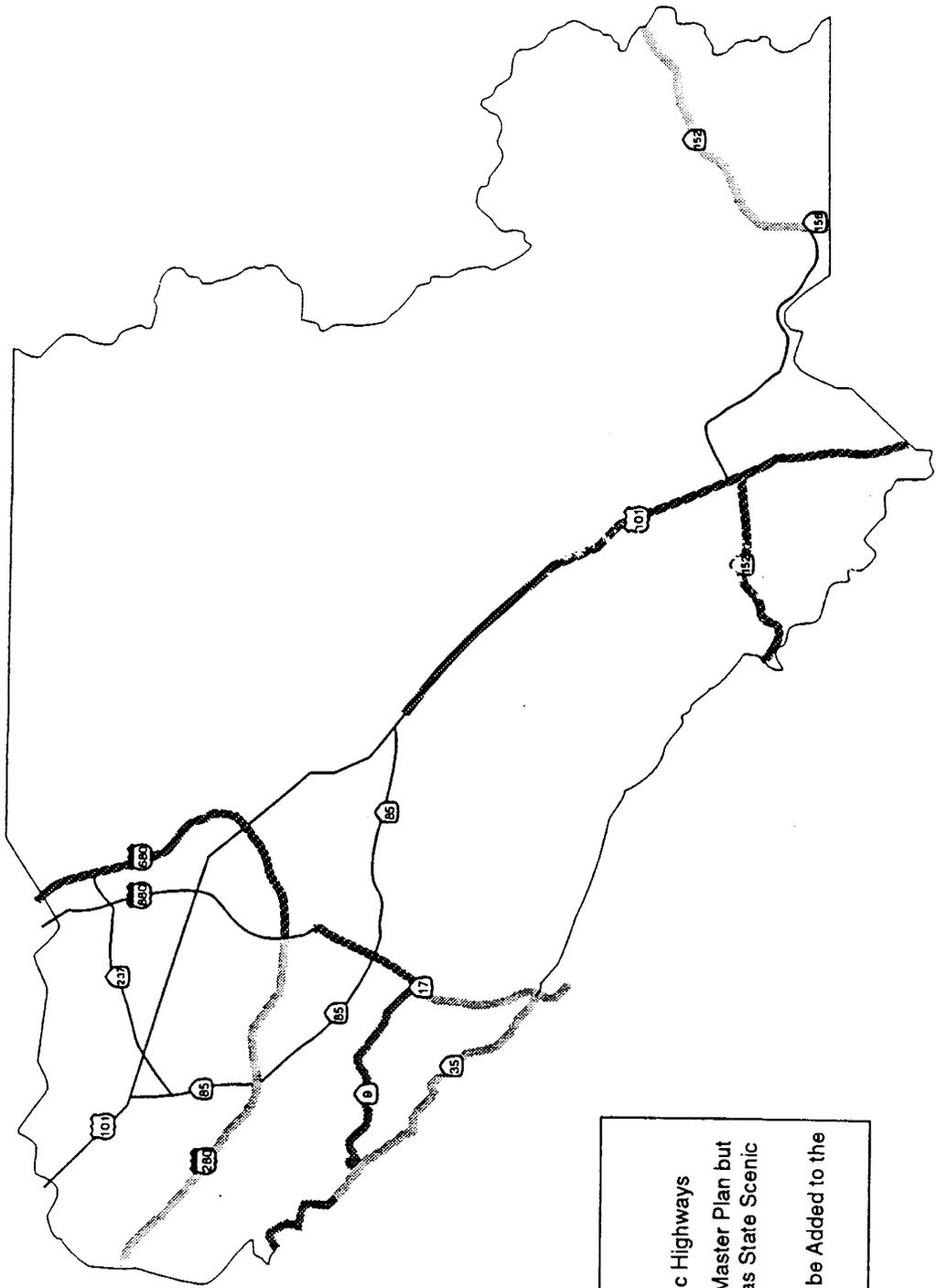
Scenic Highways⁴

The Scenic Road System of Santa Clara County consists of all existing and proposed state scenic routes within the County and County scenic routes. County scenic routes include scenic freeways and expressways, scenic arterial routes, and scenic rural roads. For a listing of these scenic roadways, see the County Zoning Ordinance (Article 43). In addition to the scenic road system, local roads requiring scenic protection are included.

Existing and proposed state scenic highways in Santa Clara County may be grouped into three categories:

1. **Existing State Scenic Highways.** Two routes in Santa Clara County have been officially designated as State Scenic Routes (see Figure 5H-1):
 - **Route 35, the Skyline Scenic Recreation Route, northern end.** Skyline Boulevard, State Route 35, is part of a scenic route that now follows the crest of the Santa Cruz Mountains from Highway 17 in Santa Clara County to San Francisco. State corridor studies have been completed in the County from

Figure 5H-1 Scenic Roads & Highways



LEGEND

- Existing State Scenic Highways
- Highways on State Master Plan but not yet Designated as State Scenic Routes
- Routes Proposed to be Added to the State Master Plan

NORTH
NO SCALE

Sources: Santa Clara County Planning Office

Planning Analysis & Development

Highway 17 north. The northernmost portion in Santa Clara County i.e., from the Santa Cruz-San Mateo County boundaries to the Santa Clara-San Mateo County boundary) has been officially designated as a State Scenic Route, as has the remainder of the route in San Mateo County north to Highway 92.

- **Route 9, Congress Springs Road and Los Gatos-Saratoga Road.** State Route 9 extends from Los Gatos to Saratoga, where it becomes Congress Springs Road, extending through the Santa Cruz Mountains and on to Skyline Boulevard. A four-foot wide bicycle lane has been built along the uphill side of Congress Springs Road.
2. **Highways on State Master Plan, But Not Yet Designated as State Scenic Routes.** Five routes in Santa Clara County are now on the State's Master Plan, but have not been officially designated as State Scenic Routes (see Figure 5H-1):
- **Route 17, from Los Gatos to the Santa Cruz County Line.** Highway 17 provides an unusually dramatic approach to the urban portion of the Bay Area. It connects with the Skyline Scenic Recreation Route, passes Lexington Reservoir, and links the Bay Area to recreational areas of the Santa Cruz County coast.
 - **Route 152, Pacheco Pass Highway.** The County is currently actively seeking official State designation of this road as a state scenic highway.
 - **Route 156, Hollister Road.** A short segment of Route 156 is located within Santa Clara County, extending from the intersection with Pacheco Pass Highway south into San Benito County and Hollister.
 - **Route 280, Junipero Serra Freeway.** The portion of Route 280 from San Francisco to its intersection with Highway 17 in San Jose is in the State Master Plan, but none of it is officially designated as a scenic route.
 - **Route 35, Skyline Scenic Recreation Route, southern end.** As indicated above, Skyline Boulevard, State Route 35, from Highway 17 north is already on the State Master Plan. The portion between Highway 17 and the Santa Cruz-San Mateo County boundary has not yet been designated as a state scenic highway.
3. **Routes Proposed to be Added to the State Master Plan.** The State's Master Plan can only be changed by State legislative action. The County has identified four additional routes for possible scenic highway designation (see Figure 5H-1):

- **Route 101, South Valley Freeway.** The South Valley Freeway, which is one of the major transportation arteries between northern and southern California, passes through lands that remain primarily in agricultural and rural residential uses.
- **Route 152, Hecker Pass Highway.** Hecker Pass Highway from Gilroy west to Mount Madonna Park and the Santa Cruz County line connects Santa Clara County with the Watsonville area and Monterey Bay. The Santa Cruz County portion of the route is presently in the State Master Plan.
- **Route 680-Route 280.** The inclusion of Route 280 from Highway 17/880 to Highway 101 and Route 680 from Highway 101 to Alameda County would complete the scenic highway network extending along the southern half of San Francisco Bay.
- **Route 17, from Los Gatos to Campbell.** The portion of Route 17 from Los Gatos to its crossing of Los Gatos Creek near Campbell Avenue parallels the Los Gatos Creek Trail and park chain.

Draft 1994 General Plan Strategies

The rural unincorporated Resource Conservation Chapter contains strategies to:⁵

Strategy 1: Maintain rural densities that help conserve scenic resources.

Strategy 2: Limit development impacts on highly significant scenic resources, such as:

- *ridgelines, hillsides and riparian area of prominence; and*
- *scenic transportation corridors and County entranceways.*

Policies and Regulations

A. Plan Policies that Foster Environmental Protection

This section of the EIR discusses existing visual and aesthetic policies, ordinances and regulations in the County that serve to protect the rural unincorporated environment. It begins with policies of the 1980 General Plan that are carried forward to the Draft 1994 General Plan, particularly those that protect the scenic resources of County lands. This section continues with

a discussion of substantive policy revisions in the Draft 1994 General Plan that are intended to strengthen environmental protection. It is followed by a discussion of other ordinances and regulations implemented by the County or other levels of government to guide growth in an environmentally sound manner.

Policies from the 1980 General Plan

The scenic resources policies from the 1980 General Plan would be maintained. USA expansion would be limited to areas already urbanizing and would not destroy the scenic value of the rural unincorporated lands [C-RC 58]. The Plan calls for maintaining rural area densities which supports the scenic and aesthetic quality found in these rural areas. It specifically calls for signage consistent with rural character and does not allow billboards in the area. Road and building sites are not allowed to create visible scars on the landscape or sited to allow major adverse visual impacts from valley floor areas [R-RC 98-101]. In Hillside areas with a slope density of 20-160 acres, clustering of residences is required which would create open space easements [LU 19].

Substantive Policy Changes in the Draft 1994 General Plan

Substantive policy changes to the Draft 1994 General Plan strengthen the preservation of rural character in the rural unincorporated portions of the County through the recommendation to establish long-term UGBs [C-RC 58; C-RC(i) 29] to ensure conservation of scenic values of rural open lands. The scenic highway designation would be promoted and scenic highways corridors protected [R-RC 97] by the Plan. A recommendation for Hillside areas [LU(i) 7] is to explore the feasibility and potential effectiveness of a viewshed protection program.

The Draft 1994 General Plan contains land use policies that provide additional environmental protection for aesthetic and scenic resources in the rural unincorporated portions of the County. There are specific requirements for clustered subdivisions as well as non-residential development. They promote a harmonious blend of development with the surrounding land uses [LU 26(b)] and protect valley floor views from adverse visual impacts on hillsides or ridgelines [LU 21(f); LU 25(d)]. Additional policies protect aesthetic values where gas and utility corridors or electrical substations are sited [LU 73; LU74], as well as limits on transportation corridors and roadside services [LU 79; LU 81; LU 83] to minimize their aesthetic impacts on surrounding land uses.

B. Ordinances and Regulations that Reduce Impacts

Design Guidelines and Review Procedures

Santa Clara County maintains a variety of review procedures and design guidelines to help protect visual and scenic resources. Most of these procedures and guidelines are contained in the County Zoning Ordinance and in area-based design policies.

The Santa Clara County Zoning Ordinance protects the visual environment by establishing setback and site approval requirements for various zoning districts. Requirements regarding lot coverage, height of different building types, setback requirements, and accepted land uses all contribute to the preservation and enhancement of individual neighborhoods and the scenic characteristics in the various zoning districts. Some zoning districts, such as the Scenic Highway and Scenic Service districts and the Design Review and Scenic Preservation combining districts, are focused on the protection of the visual environment. These districts are shown on the zoning maps available at the County Planning Office.

The County Zoning Ordinance includes the provisions for and a listing of the scenic roadways (Article 43). A special sign regulation (Article 29) sets standards for informational, subdivision, directional, political, agricultural stands, and road hazard signs.

Design Review: The Design Review Guidelines include standards for architecture, siting, grading, and landscaping. The design review process is a permit procedure established by Article 45 of the County Zoning Ordinance. The design review procedure requires that the placement and appearance of any structures and associated landscaping or grading be compatible with the General Plan, zoning district, character of the neighborhood and adjacent development, the natural environment, and any applicable County Design Guidelines. The design review combining district (-d) is used to complement the requirements of the base zoning district in especially visually sensitive areas. These areas can be located on a County zoning map available through the County Planning Office. Design review is mandatory for all development within these combining districts, among which are the Hillside districts around Los Gatos and the Santa Teresa Foothills area. In addition, any structures proposed within established 100-foot scenic roadway setbacks must also receive design review.

Architecture and Site Approval: Architecture and Site Approval (ASA) is a procedure established by the County Zoning Ordinance to review the quality of architectural and site design of certain projects.⁶ The County Zoning Ordinance (Section 51-1) defines the intent of ASA as a measure to "secure the general purposes of... the General Plan and to maintain the character

and integrity of a neighborhood by promoting the excellence of development, and encouraging the most appropriate development and use of land in harmony with the neighborhood." ASA is required of all industrial, commercial, professional office, historic and scenic zoning districts. It is required with any application for a use permit (except certain uses within Agricultural zoning districts), any use or residential permits issued within -H (Historical) combining districts and for grading permits that are associated with use permits. The guidelines include standards for architecture, site design, grading, energy efficiency, landscaping, parking, signs, and lighting. Certain zoning districts demand different sets of ASA standards. For example, in Historic Conservation districts such as New Almaden, special efforts are made through ASA to ensure that new developments blend into the existing neighborhood. A goal of ASA in zoning districts such as Agricultural Ranchlands and Hillside is to find ways for development to blend into the natural landscape through exterior colors and landscaping.

Area-Based Design Policies: Santa Clara County has developed specific design policies for areas with visual sensitivity to certain types of land uses. The most extensive of these policies involve guidelines for the San Martin Area, a rural community in the South County. The flat topography and location of San Martin make it a prime area for industrial development that could be incompatible with the mostly agricultural and low-density residential uses in the area. In 1990, the Santa Clara County Planning Commission adopted the "Design Guidelines for Non-Residential Development in San Martin."⁷ These guidelines are being refined and integrated in a new San Martin Design Guidelines Report.

According to the San Martin Design Guidelines, "the County of Santa Clara endorses the desire of San Martin residents to retain their rural lifestyle in contrast to the urban areas of the region." The design guidelines are intended to inform and guide public and private property development in San Martin so that the form and character of the overall community is protected and enhanced."⁸

Project Specific Guidelines: There are specific guidelines regarding the siting of the following: Commercial Antenna Guidelines, Farmer's Market Standards, R.V. Park Guidelines, Service Station Standards.

Grading Ordinance: The Grading Ordinance contains provisions for revegetation of graded areas; for more detail regarding this ordinance, see the Geology Chapter, 5K.

C. Significance Criteria

Visual quality is a subjective matter. It is difficult to define a point at which a visual impact becomes significant enough to warrant mitigation. This EIR uses values that are both explicit

and implicit in the land use controls created by the County to preserve the character of the rural unincorporated area. *Supplementary Document G (b)* of the CEQA Guidelines states that a project will have a significant effect on the environment if it will "have a substantial, demonstrable negative aesthetic impact."

At a general plan level of review, the possibility of significant impacts can be avoided by adopting the appropriate policies recommended in the Draft 1994 General Plan. This does not mean that individual projects would be free from significance visual impacts. On the contrary, most of the County's land use controls pertaining to visual quality are intended to guide development such that it does not cause visual impacts. Individual project review for visual impacts would be required even though the General Plan itself would have no significant impacts.

Impacts and Mitigations

Impact 1. Visual Effects of Growth on Open Space. Santa Clara County has a diversity of natural and beautiful settings from coastal mountain ranges and vast areas of agricultural lands to a developed urban landscape, all of which have scenic and aesthetic value. Much of the lands in the rural unincorporated areas of the County are used for agricultural purposes. The Draft 1994 General Plan allows for some development of these lands (see the Growth Projections section in Chapter 5A). Visual impacts could occur on rural unincorporated portions of the County. The following land use designations allow growth that has the greatest potential to cause visual impacts: Rural Residential, Agriculture, Hillside, and Ranchlands.

Rural Residential: Development of the remaining Rural Residential parcels in the County could result in visual impacts from ranchette type development, and the construction of roads and other buildings. San Martin is the area most likely to be affected although much of the Rural Residential (RR) area is already developed. The Draft 1994 General Plan constrains RR expansion, which would reduce this impact. For parcels with subdivision potential, the Draft 1994 General Plan encourages clustering of residential units and dedication of the remaining open space. These policies would minimize the visual impacts of residential development in rural areas. The Plan encourages land uses compatible with scenic resource conservation [C-RC 58; C-RC(i) 29] as well as maintenance of rural densities [C-RC 94-95] to preserve scenic quality and open space. There would be no significant impact in the Rural Residential area.

Agriculture (A): Draft Plan policies [LU 12-13] do not allow golf courses in the agriculture preserve east of Gilroy and require prior studies before golf course applications would be accepted in other agricultural areas. Golf courses would create a visual anomaly in farm areas because the manicured appearance of the former is dramatically different from the crops and fallow fields of the latter. Golf courses give a more suburban appearance to the landscape, and thus would diminish the perceived rural quality of farm areas. Agricultural uses themselves, particularly intensive uses such as dairies or mushroom farms, also may be aesthetically unpleasing to some people. Sheds, vehicles and equipment in open view can mar the perceived qualities of rural areas. USA expansion into agricultural areas could result in land use changes that alter the visual character of the rural areas. This would be inconsistent with the County's desire to preserve agriculture and maintain rural character. The Plan calls for the strengthening of long-term growth boundaries [C-GD 19]. Adoption of this policy would strengthen existing controls to maintain rural quality, including the desirable visual qualities of rural areas. *Golf courses and some agricultural uses could have a significant visual impact.*

Mitigation Measure 1: Limit golf courses to areas that are not visually prominent and can be screened from view.

and

Mitigation Measure 2: Require landscaping using native species on and around golf courses so that their appearance blends in with natural features of the environment. *These mitigation measures would reduce the visual impacts of golf courses to a level of insignificance.* [Responsibility: Santa Clara County Planning Department]

Mitigation Measure 3: Encourage farmers to screen unsightly buildings, equipment and areas with native plant species. *If successful, this measure could reduce the impact to a level of insignificance.* [Responsibility: Santa Clara County Planning Department]

Hillsides: Golf courses, buildings, roads and landscaping have the potential to alter the visual quality of Hillside areas in ways that are incompatible with some

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of the character-defining features of Santa Clara County as described in the Draft 1994 General Plan. These features include the rolling hillsides, the Santa Clara Valley, oak woodlands, riparian areas and orchards. To protect the Hillside areas, the Draft Plan proposes clustering of development and dedication of open space easements [LU 28-29]. The Plan also calls for identifying areas of greatest sensitivity to visual impacts of development and applying design review under the -d combining district if the area is one of prominence or in a highly significant scenic area [R-RC(i) 35]. *Golf courses could have a significant visual impact.*

Mitigation Measure 1: Limit golf course development to hillside locations that are not visually prominent.

Mitigation Measure 2: Require landscaping using native species on and around golf courses so that their appearance blends in with natural features of the environment. *Mitigation measures 1 and 2 would reduce the visual impacts of golf courses to a level of insignificance.* [Responsibility: Santa Clara County Planning Department]

Ranchlands: There is a limit on the number of parcels that can be created in Ranchlands and land use decisions are required to prevent an influx of people to the area [LU 39, 41, 42]. Consequently, the development potential of Ranchlands under the Draft 1994 General Plan is very small, averaging four subdivided parcels per year on an average of 1,165 acres per parcel.⁹ The 60 subdivided parcels that would be approved over the 15-year life of the Plan would not have a significant impact on the rural and agricultural character of Ranchlands.

Mineral extraction, grazing or recreational land uses could alter the natural and rural appearance of Ranchlands. Poor grazing practices can produce erosion and loss of vegetation, and grazing tracks can mar the natural landscape. Intensive uses such as quarries are highly constrained by the Zoning Ordinance provisions for Surface Mining and Land Reclamation. Policy R-RC 80 of the Draft 1994 General Plan requires that rehabilitation, reuse and erosion control of mineral extraction areas be made a condition of any Use Permit. Non-residential uses such as quarries or recreational facilities require further site and environmental assessment.

The policies of the Draft 1994 General Plan and other land use controls adequately protect the visual character and the natural landscape. The various design and architectural review procedures serve to strengthen this protection. It is not expected that negative visual impacts would occur on ranchlands. *Ranchlands uses would not have a significant impact on visual resources.*

Mitigation Measure. No further mitigation is required.

- Impact 2. Development of Ridgelines.** The largely undeveloped ridgelines on the east and western sides of the valley are visible from the valley floor; they help define the character of Santa Clara Valley and enhance the attractiveness as well as quality of life in the County. Projected development under the Plan could occur on ridgelines, which could be visible from the valley floor of South County. The Draft 1994 General Plan policies R-RC 95 (b); LU 21(f); LU 25(d) protect and discourage development of natural resources and view corridors on the surrounding ridgelines. Policy R-RC 97 requires that hillsides and other scenic resources receive " . . . the utmost consideration and protection," although it does not preclude ridgeline development. Policy R-RC 101 requires that structures on ridgelines be located, constructed and landscaped so that they do not create a major negative visual impact as seen from the valley floor. It further states that ". . . land should be divided in such a way that building sites, if possible, are not located on ridgelines" *If General Plan policies are implemented, the impacts of potential ridgeline development would be less than significant.*

Mitigation Measure: No further mitigation is required.

- Impact 3. Gateways and Scenic Transportation Corridors.** Gateways are defined as entranceways which establish the first impression a motorist has of Santa Clara County. The two major gateways into the South County area are Highway 101 from the south and Highway 152 from the east. Development along these gateways could cause adverse impacts to the visual landscape if not appropriate to the character of the County's rural unincorporated area. Policy R-RC(i) 33 provides protection for Pacheco Pass, Hecker Pass and Route 101 from the San Jose City limits to the San Benito Countyline. Policies R-RC(i) 34; R-RC 98 and R-RC 99 limit signage, allow no new billboards and require entrance signs compatible with the scenic qualities of the areas.

The responsibility for preserving scenic highways (once designated) lies with the local jurisdiction. Plan policies that offer protection to these corridors are R-RC

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97, described above; R-PR 39-41 which require land uses on roads with scenic qualities to be compatibly sited and designed; R-PR 44 which seeks to limit strip commercial development and R-PR-45 which requires at least a 100 foot setback of new structures from scenic roadways in rural areas. The County ordinances, guidelines and policies in the Draft 1994 General Plan protect and preserve the gateway areas and scenic transportation corridors. *Development under the plan would not have a significant impact on gateway and scenic transportation corridors.*

Mitigation Measure: No further mitigation is required.

Endnotes to Visual/Aesthetics

1. Santa Clara County Transit District, Santa Clara County Transportation Plan T2010 Final Environmental Impact Report, October 1991, page 171.
2. Santa Clara County Transit District, op-cit, page 171.
3. Open Space Preservation: A Program for Santa Clara County, report of the Preservation 2020 Task Force, April 1987, page v.
4. 2/10/93 Countywide Parks and Recreation Chapter, pages 30-34.
5. County of Santa Clara Planning Office, Santa Clara County General Draft 1994 Plan, Rural Unincorporated Resource Conservation Chapter, 11/18/93 draft, pages 67-69.
6. County of Santa Clara Planning Commission Resolution No. 9494, "Guidelines for Architectural and Site Approval," March 19, 1981.
7. San Martin Integrated Design Plan, Administrative Draft, June 1994, Urban Design Studio.
8. San Martin Integrated Design Plan, Administrative Draft, June 1994, Urban Design Studio.
9. From Table 5A-3 and 5A-4, 56 parcels/14 years = 4 per year x 15 years under Draft General Plan = 60 subdivided parcels.



CHAPTER 5I HAZARDOUS SUBSTANCES

Environmental Setting

The Environmental Protection Agency has defined a "hazardous" substance as one "which, because of its quantity, concentration, or physicochemical or infectious properties, may either increase mortality or produce irreversible or incapacitating illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of or otherwise managed."¹ The term "hazardous substance" includes both "hazardous material" (i.e., a hazardous substance used as part of a commercial, industrial, or household process) and "hazardous waste" (i.e., a hazardous substance that is disposed of).

Hazardous Waste Generation, Treatment, and Disposal

An estimated 140,000 tons of hazardous waste were generated in Santa Clara County in 1986, indicating the scale and diversity of hazardous materials in use in the County. Large industries generated just over 87,000 tons; smaller commercial, industrial, and institutional facilities (those with ten or fewer employees) generated another 52,000 tons; and individual households produced an estimated 1,600 tons. Tables 5I-1 and 5I-2 show the sources and composition of hazardous waste generated in the County. The term "manifested" waste refers to the fact that according to federal and state law, all hazardous waste shipped off-site by a generator must be recorded with the Department of Health and Safety (DHS) in the form of a manifest.

Of the total amount of declared waste shipped off-site in 1986, 75% was exported for treatment and disposal to other counties in California.² The cost and liability associated with toxic waste disposal have provided the incentive for firms to increase on-site recycling and treatment.³

All hazardous waste must be treated before it is disposed of on land. The pretreated waste must then be placed in a new type of hazardous waste management facility known as a residuals repository.⁴ There are no general areas identified within Santa Clara County as potential sites for residuals repositories.⁵

All hazardous waste disposal facilities must be located at least 2,000 feet from any place of residence or an immobile population so that those nearby are not jeopardized by fugitive air emissions, explosions, noise, or other possible impacts. Applications for siting hazardous waste management facilities are subject to General Plan policies, zoning regulations, Hazardous Waste Management Plan siting criteria (see below), and the provisions of the California Environmental Quality Act (CEQA).

TABLE 5I-1
Sources of (Manifested) Hazardous Waste
Generated in Santa Clara County, 1986

Industry Group	Tons	% of Total
Electronic Equipment	22,270	25
Semiconductor Production	14,420	16
Electric, Gas, Sanitary	13,890	15
Transportation	7,920	9
Chemical Products	6,600	8
Petroleum Refining	4,680	5
Fabricated Metal Production	2,410	3
Miscellaneous Industries	15,240	17
TOTAL	87,430	100

Source: Santa Clara County Hazardous Waste Management Plan, August 1991.

TABLE 5I-2
Composition of (Manifested) Waste Generated in Santa Clara County, 1986

Industry Group	Tons
Waste Oil	11,200
Halogenated Solvents	2,280
Non-Halogenated Solvents	11,750
Organic Liquids	8,930
Pesticides	20
Dioxins	730
Oily Sludges	4,730
Halogenated Organic Sludges and Solids	430
Non-Halogenated Organic Sludges and Solids	2,750
Dye and Paint Sludges and Resins	1,640
Metal-Containing Sludges	4,200
Metal-Containing Liquids	14,430
Non-Metallic Inorganic Sludges	1,130
Non-Metallic Inorganic Liquids	8,710
Cyanide and Metal Liquids	30
Contaminated Oil	5,580
Miscellaneous Waste	8,890
TOTAL	87,430
<i>Source: Santa Clara County Hazardous Waste Management Plan, August 1991.</i>	

Santa Clara County industries and agriculture are major users of hazardous materials. In addition, households add to the demand for hazardous materials and contribute to the production of hazardous waste. Recently identified problems and issues have included the following:⁶

- **Toxic waste generated by continued population and economic growth.** The County's economic well-being and quality of life depend to a large extent upon production and manufacturing processes that use hazardous materials. A recent forecast by the Association of Bay Area Governments (ABAG) predicts that, should existing trends and technology development continue, Santa Clara County will generate 40% more hazardous waste in the year 2000 than in 1986--a total of 250 million pounds of new hazardous materials each year.
- **Continued toxicity of past spill and leak sites.** Despite numerous hazardous materials and groundwater clean-up programs, existing contamination of soil or groundwater is extensive, requiring on-going clean-up efforts. While some problems have resulted from agricultural uses and septic systems in the rural unincorporated area (see Chapter 5M, Water Supply and Wastewater), most contamination areas are located within incorporated cities. Volatile organic chemicals (VOCs) such as solvents and metal degreasers, used by high-tech industries as well as by dry cleaners and other low-tech industries, are expected to continue to threaten groundwater quality because they are highly toxic, very migratory, and do not easily decompose.

While storage and use of VOCs have become more regulated in recent years, past dumping and storage practices permitted these chemicals to leak into the soil, resulting in significant soil contamination at a number of sites. Evidence of these chemicals has been found in nearby wells, suggesting contamination of the upper aquifer groundwater. If these VOCs remain in the soil, they seep into the groundwater supply. Since it takes many years to clean the soil, pump out the water and treat the contaminated plumes, chemicals from past spills and leaks remain a threat to groundwater.

Groundwater treatment at the IBM and Fairchild soil contamination sites in the City of San Jose, discovered in 1979 and 1981, respectively, will not be completed for at least another 20 to 30 years. Over 150 industrial soil or groundwater contamination sites are targeted for clean-up in Santa Clara County, including 29 sites that are listed in the Superfund National Priorities List. Most of these Superfund sites are industrial sites located within the boundaries of incorporated cities.

- **Identification of leaky fuel tanks.** In 1986, the Santa Clara Valley Water District began a program to investigate and assist in the clean-up of motor fuel leaks at gas stations and other sites. From 1986 to 1989, the number of leaking fuel tanks detected in Santa Clara

County tripled, from 320 to just under 1,000 sites. Additional discoveries of individual leaks or sites contaminated with gasoline or diesel fuel are anticipated.

Site clean-up under the SCVWD program will continue throughout the decade, but is expected to progress slowly. Due to the large number of contaminated sites, a shortage of personnel resources, and the long time period required for clean-up (five to six years), the sites are likely to remain a threat to groundwater quality for the foreseeable future. The SCVWD is directly administering clean-up of 135 of these sites, while the remaining cases are handled by the responsible parties. The SCVWD's Leak Detection Program has developed guidelines for the self-directed clean-up of these facilities.

- **Continued vulnerability of South County water quality.** Due to the combination of shallow wells, poor soil barriers, and residual soil contamination, it is anticipated that water in the South County valley and Hillside areas will continue to be vulnerable to nitrate contamination.⁷ (Please also refer to Chapter 5M - Water Supply and Wastewater for a discussion of water quality issues.) Shallow wells, which are the primary source of drinking water in the area, have a higher level of contamination because they draw from the less protected upper aquifer. In the Hillside areas, the bedrock does not filter out many contaminants from the water as they seep from septic systems into the water supply. In the valley, contaminants can reach deep water aquifers because there is no impermeable clay layer separating the upper and lower aquifers.

Recent Hazardous Materials Legislation

Federal:

- Resource and Conservation and Recovery Act of 1965
- Comprehensive Environmental Response, Compensation, and Liability Act of 1980
- Emergency Planning and Community Right-to-Know Act of 1986
- Toxic Substances Control Act
- Environmental Protection Agency Storm Water Discharge Program

State:

- Sher Bill (AB 1362 - Hazardous Materials Storage)
- Waters Bill (AB 2185/2187 - Hazardous Materials Release Response Plans and Inventory)
- La Follette Bill (AB 3777/1059 - Extremely Hazardous Substances)
- Toxic Gas Model Ordinance (AB 1021)
- Cortese Bill (AB 3750 - Hazardous Waste and/or Substance Site)
- Safe Drinking Water and Toxics Enforcement Act (Proposition 65)
- Toxic Pits Cleanup Act
- State Superfund Act
- California Land Disposal Restriction Program (modified 1985 and 1986)
- Tanner Act (AB 2948 - Hazardous Waste Management Plans)

Agricultural fertilizers and seepage from septic tanks are the primary sources of nitrate contamination. Where Rural Residential development replaces agriculture, valley soil is likely to become less saturated with nitrates, because residential uses deposit less of these chemicals into the soil than agricultural activities. As nitrates currently in the soil will take a long time to reach the aquifer, contamination will remain high many years after the pollution sources have been reduced.⁸ Nitrates are relatively harmless to adults, but can cause the potentially fatal "blue baby syndrome" in infants. In an informal survey conducted in 1978, the SCVWD found that many wells contained water with nitrate levels above the state "action level" of 45 parts per million; however, health problems reported due to excessive nitrate levels in water are very rare. (See also Chapter 5M, Water Supply and Wastewater.)

- **Greater risks posed by private wells.** While private wells provide only a small portion of the County's drinking water, a recent study by the Santa Clara County Health Department indicated that many of the older private wells present a potential health hazard to users. Private wells are at greater risk of contamination for a number of reasons. First, older private wells are not usually constructed under the same high standards as municipal or commercial wells, with the result that contaminants enter the water system more easily. Second, many private wells draw from the less protected shallow aquifer. The Health Department survey reported that wells less than 150 feet deep showed a higher rate of both organic and bacterial contamination. Third, private water systems are not subject to existing state laws that require water distributed by public water systems to be periodically tested for the presence of contaminants and to meet state and federal drinking water standards. As a result, the quality of this water is often untested and unknown. Finally, private wells may not be as well maintained as municipal wells. Newly constructed private wells are required to meet local well construction standards. (See also Chapter 5M, Water Supply and Wastewater.)

Recent Legislation⁹

In recent decades, Congress and the state legislature have adopted many measures that require specific actions by local governments to assess and plan for the safe handling and disposal of hazardous materials. In addition, hazardous materials are regulated indirectly by some federal and state laws or programs focused on other issues. The laws are listed in the side bar on the following page.

The 1984 amendments to the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) created the Superfund, which provides federal funds for cleanup of hazardous waste sites. CERCLA requires each state to provide assurance to the federal Environmental Protection Agency (EPA) that adequate capacity exists to handle the state's hazardous waste treatment and disposal needs for the next 20 years. Should the state not

provide adequate assurance, Superfund dollars for cleaning up contaminated sites could be withheld.

In response to this federal initiative, the state legislature passed AB 2948 (the "Tanner Bill") in September 1986, requiring the establishment of County Hazardous Waste Management Plans (CHWMPs). The function of the CHWMPs is to promote the evaluation of local hazardous waste management problems and needs, and to make policy and program recommendations to improve protection of public health and safety and the environment while maintaining the economic viability of the state.

County Hazardous Waste Management Plan¹⁰

All of the cities in Santa Clara County joined the County in developing a County Hazardous Waste Management Plan (CHWMP) in order to create a comprehensive and coordinated Countywide approach to hazardous waste management planning. The primary objective in developing the CHWMP was to protect the health, safety, and economic well-being of citizens and the environment. The plan seeks to achieve this objective while also recognizing the state-

mandated responsibility to address the specific hazardous waste needs of local businesses and households.

To achieve this, the CHWMP encourages waste reduction and on-site treatment, and establishes a process for siting of new hazardous waste facilities. The plan encourages new and existing hazardous waste generators in the County to implement source reduction, on- and off-site recycling, and on-site treatment to the maximum extent feasible in their use, handling, and disposal of hazardous materials and wastes.

Recognizing that additional waste treatment and disposal facilities are likely to be needed, the CHWMP sets forth a planning process to anticipate and respond to this need by 1) reducing hazardous waste generation, 2) siting appropriate and economically feasible hazardous waste management facilities for waste streams that cannot be reduced, and 3) signing agreements with other counties as a means of using needed and available hazardous waste management capacity in other jurisdictions.

The CHWMP includes a set of policies and criteria for siting hazardous waste management facilities through the year 2000. The siting criteria address six areas of concern:

1. Protection of residents in Santa Clara County;
2. Assurance of the structural stability of the facility;
3. Protection of water quality and resources;
4. Protection of air quality;

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5. Protection of environmentally sensitive areas; and
6. Protection of social and economic goals.

The siting criteria and policies are intended to be used to determine appropriate facility design and performance standards, in addition to determining the acceptability of the selected site. The criteria apply to all Countywide hazardous waste treatment siting decisions, including siting decisions within individual cities. The criteria are to be used whenever a land use decision is required to site and construct a new hazardous waste facility or expand an existing facility. The criteria are designed to identify the most appropriate locations with regard to public and environmental safety.

The CHWMP contains a siting map that shows possible locations for commercial hazardous waste management facilities, based on the siting criteria. These locations primarily consist of industrial areas located within incorporated cities in the valley floor (e.g., San Jose, Santa Clara, Sunnyvale, Cupertino, Campbell, Gilroy).

The CHWMP is the primary local plan governing hazardous waste, not the County's General Plan. The CHWMP and city and County General Plans are intended to complement one another and be applied to a project simultaneously. Consequently, in addition to meeting CHWMP siting criteria, a project will be required to comply with additional conditions imposed by the applicable General Plan and other local regulations.

Local Development Regulations

The County and cities are responsible for regulating land use and development within their jurisdictions. Through the jurisdiction's General Plan, Zoning and Health Codes, and other development controls, local government seeks to protect the public and the environment from hazardous substances. Where hazardous materials use occurs in close proximity to other land uses, development standards can ensure that the materials are handled as safely as possible.

Both the Uniform Fire Code and the Uniform Building Code include regulations pertaining to the safe use and storage of hazardous materials, and to the construction of structures that house activities involving hazardous materials. The General Plan policies and Land Use Map strive to separate hazardous activities from other uses.

Draft 1994 General Plan Strategies

The Draft 1994 General Plan includes two Countywide strategies and policies for hazardous materials in the Health and Safety Chapter,¹¹ listed below. There are no comparable measures for the rural unincorporated area alone, although the County is recognized as having implementation responsibilities. However, the previously adopted Hazardous Waste Management

Plan did include policies relating to facility development in the unincorporated area. Those policies were evaluated for their environmental impact at that time.

Strategy 1: Safely and efficiently manage hazardous materials.

Strategy 2: Ensure the adequacy of local hazardous waste treatment facilities.

Policies and Regulations

A. Plan Policies that Foster Environmental Protection

Policies from the 1980 General Plan

All feasible measures to assure safe and effective management of hazardous materials and treatment facilities should be employed, including compliance with state and federal mandates. [C-HS 14]

Substantive Policy Changes in the Draft 1994 General Plan

Two additional policies were adopted: to achieve a more effective, efficient, and economical regulatory environment, all feasible means to simplify and coordinate locally-implemented hazardous materials management regulations should be considered. [C-HS 15]. Periodically review and evaluate the facilities siting criteria of the County's Hazardous Waste Management Plan. [C-HS 16]

B. Ordinances and Regulations that Reduce Impacts

The Hazardous Material Storage Ordinance and Uniform Fire Code relate to the safe use, handling and storage of hazardous materials in order to prevent injury, releases or potential contamination. This includes requirements for storage and labelling of hazardous materials. The County's Hazardous Waste Management Plan (discussed in the Environmental Setting section) establishes a process and criteria for the siting of new hazardous waste facilities.

C. Significance Criteria

The CEQA Guidelines, *Supplementary Document G (v) and (z)* indicate that a project will normally have a significant effect on the environment if it will: "*create a potential public health hazard or involve the use, production or disposal of materials which pose a hazard to people or animal or plant populations in the area affected; and, interfere with emergency response plans or emergency evacuation plans*". Further, for purposes of this EIR, a significant impact would

result from the improper treatment, storage, transportation, or disposal of or otherwise management of hazardous substances.

Impacts and Mitigation

Impact 1a. Household Hazardous Waste (HHW). In March of 1994, the County issued a Draft Household Hazardous Waste Element, as required by state law. In the past, HHW was put in a landfill. The HHW Element recognizes that due to the fact that a number of County landfills are located in close proximity to the bay and wetland ecosystems, and that groundwater supplies 50 percent of the drinking water, special measures must be taken to protect the environment and groundwater by keeping hazardous waste out of landfills.¹²

As indicated in the HWMP, the smallest per capita waste generators are residential households that typically generate hazardous waste through the use of motor oil, pesticides, and solvents.¹³ Growth projections provided for in the Draft 1994 General Plan indicated additional housing will contribute to HHW stream.

In 1986, there were 1,600 tons of hazardous waste disposed by households Countywide. In 1990, there were 520,180¹⁴ households Countywide. This results in .003 tons or approximately 6 pounds of hazardous waste per household. If this is applied to 400 housing units expected under the Draft 1994 General Plan, there would be an increase of 2,400 pounds or 1.2 tons. This is less than a 1% increase in the Countywide household hazardous waste stream.

The amount of HHW to be collected, recycled or disposed from 1991 to 2000 in the unincorporated areas is dependent on several factors: convenience, accessibility, and efficiency of the collection service, funding available to operate the services, and the success of source reduction efforts. It is anticipated that demand for HHW services will grow as more residents become aware of proper disposal procedures and as the population of the County increases. Therefore, the amount of hazardous waste handled by the Environmental Health Department is expected to increase even if the use of hazardous materials remains constant. This could result in more of an increase in household hazardous waste than noted above. Even if it were to double, however, it would still be less than 1% of the County wide household hazardous waste stream. At the same time, public education should result in changes in purchasing habits that decreases in HHW generation. Using 1990 as the baseline year, it is expected that implementation of the programs described in the HHW Element will result in annually-increasing

diversion of HHW from the municipal waste stream to established HHW programs in the unincorporated areas of Santa Clara County.¹⁵

The residential growth projected for the Draft 1994 General Plan could increase the HHW stream. However, the increase would be less than 1% of the Countywide household hazardous waste stream. *Therefore, the impact of household hazardous waste from growth under the Plan would not have a significant impact on waste handling facilities.*

Mitigation Measure: No further mitigation is required.

Impact 1b. Agricultural-related Hazardous Waste. The Draft 1994 General Plan seeks to maintain and encourage continued agriculture in South County. Agricultural-related hazardous waste can be divided into three impact areas: the storage and use of the chemicals; the secondary impacts associated with runoff and seepage of hazardous chemicals into the groundwater; and hazards related to those who work with and use the chemicals.

As indicated in the Environmental Setting section, the use and storage of hazardous chemicals is highly regulated by both state and federal policies. In relation to agricultural use, farmers typically purchase only the amount of chemicals required at a particular time, use it up on the field, and are left with containers to properly discard. Consequently, large quantities of chemicals are not normally stored on farm. Additionally, the Santa Clara County Agricultural Commissioner's office indicates that the County farmers do not engage in high pesticide use, in comparison to other counties. Kern County for example, may have as many as 10,000 reported chemical applications in a month, whereas Santa Clara may only have that same amount in a year.¹⁶

The secondary impacts of agricultural chemicals that may runoff and seep into groundwater are discussed in Chapter 5M-Water and Wastewater.

The Santa Clara County Agricultural Commissioner's (SCCAG) office indicates that between 85-87% of the reported cases of persons suffering from contact with chemicals come from the industrial sector, usually involving the use of sanitizers such as chlorine.¹⁷ State and federal regulations have been designed to protect all those associated with pesticide use, and the countywide incidence of illness is very low, according to the SCCAG. The SCCAG investigates more than 100 cases per year, but typically, only 4-6 persons are treated annually for agricultural-related pesticide illness¹⁸.

The SCCAG has just completed a three-year education program, funded by the Hazardous Materials Oversight Committee, to increase pesticide awareness for workers and the medical community. By law, medical practitioners are required to notify the Agricultural Commissioner's office within 24 hours of treating someone suspected of pesticide-related illness, so that the incidents can be investigated. However, the reporting by the medical community is spotty. The education program included mailers and follow-up surveys, media broadcasts (both in english and spanish), an 800 number for information or to report an incident, and in-service training with public health nurses. Due to the fact that compliance with state and federal regulations is high, *no significant impacts related to agricultural-related hazardous waste are anticipated.*

Mitigation Measure: No further mitigation is required.

Impact 1c. Commercial/Industrial-related Hazardous Waste. The HWMP indicates that the industrial sector is by far the largest generator of hazardous wastes in the County and is expected to remain so in the future. However, the hazardous waste generation estimates of the HWMP for the year 2000 did not include the effects of waste reduction programs. As discussed in the Land Use chapter of this EIR, there is not expected to be an increase in jobs in the rural unincorporated area between 1990 and 2010. As job growth is an indicator of economic activity, it is likely that industrial and commercial development will not increase either during that period. A lack of economic growth suggests that hazardous waste generation would decline as well in the rural unincorporated area. This combined with required and voluntary waste reduction programs would reduce hazardous waste generation of commercial and industrial sources. *Commercial and industrial development under the Plan would not have a significant impact on the hazardous waste stream.*

Mitigation Measure: No further mitigation required beyond the implementation of existing policies and regulations.

Impact 2. Existing Spill Sites and Leaky Fuel Tanks. As indicated in the Environmental Setting section, the unincorporated area does have sites that contain existing spill materials and/or leaking fuel tanks although they have not been mapped. Due to the number of sites (countywide) requiring cleaning up, and the shortage of staff to accomplish it, it is anticipated that some of these sites will remain contaminated during the life of the Draft 1994 General Plan. This could impact the viability of future development in proximity to the sites. It could also indirectly affect existing and future development form seepage into the groundwater system. *This is considered a significant impact.*

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Mitigation Measure 1: The location of contaminated sites should be mapped, described and keyed to land use designations of the Draft General Plan to identify areas of potential development that are at risk of exposure to petroleum and other products associated with leaky tanks. This would inform and warn potential buyers and developers of the hazards which are expected to be present in the vicinity of a spill or leak until a clean-up is completed

Mitigation Measure 2: Over time, existing programs to monitor and remediate contaminated sites are expected to clean-up all known leaky fuel tanks and spills. As long as public exposure to these hazards is prevented, the impact will be eliminated.

Mitigation measures 1 and 2 would, together, reduce the impact to a level of insignificance.
[Responsibility: Santa Clara Valley Water District and Santa Clara County Planning Department]

Impact 3. Transportation of Hazardous Materials. The transportation of hazardous materials and waste occurs on a daily basis throughout the County. This occurs in many forms including fuel deliveries to gas stations, as well as moving manifested waste from one facility to another. This practice would not change upon implementation of the 1994 Dr General Plan. Transport of hazardous materials and waste is highly regulated by the U.S. Department of Transportation and the State of California Department of Toxic Substances Control. Transport of hazardous materials and waste has the potential to significantly impact public health as well as the environment in the unlikely event of an accident. Spilled chemicals could become airborne and be inhaled by humans and animals, or they could be picked up in runoff and impact agriculture, natural vegetation, soils and streams. The growth projected under the Draft General Plan would increase the amount of people that are exposed to such hazards. *Impacts from transportation of hazardous materials and waste through the rural unincorporated area would be mitigated to an insignificant level through implementation of the extensive existing state and federal regulations.*

Mitigation Measure: No further mitigation is required.

Cumulative Impacts

Impact 4. Hazardous Waste Stream. Countywide, hazardous waste generation is expected to increase by 40% (250 million pounds per year or 125,000 tons) between 1986 and 2000, according to ABAG. This is a substantial increase. The contribution from the rural unincorporated area is based on cumulative residential development of 2,800 dwelling units. No increase is expected for commercial and industrial facilities because job growth is expected to decline in the rural unincorporated area. No increase in agriculturally generated wastes are expected because this sector is not expected to grow and because it does not generate substantial hazardous waste disposal problems. Using the generation rates in Impact 1, the cumulative residential development would generate 16,800 pounds (8.4 tons) of household hazardous waste annually by the year 2010. This is .5% of the countywide household hazardous waste stream of 1,600 tons and an infinitesimal part of the 250 million pound increase projected by ABAG for the entire Santa Clara County hazardous waste stream. *The rural unincorporated area would not make a significant contribution to the cumulative hazardous waste stream to be handled by the County.*

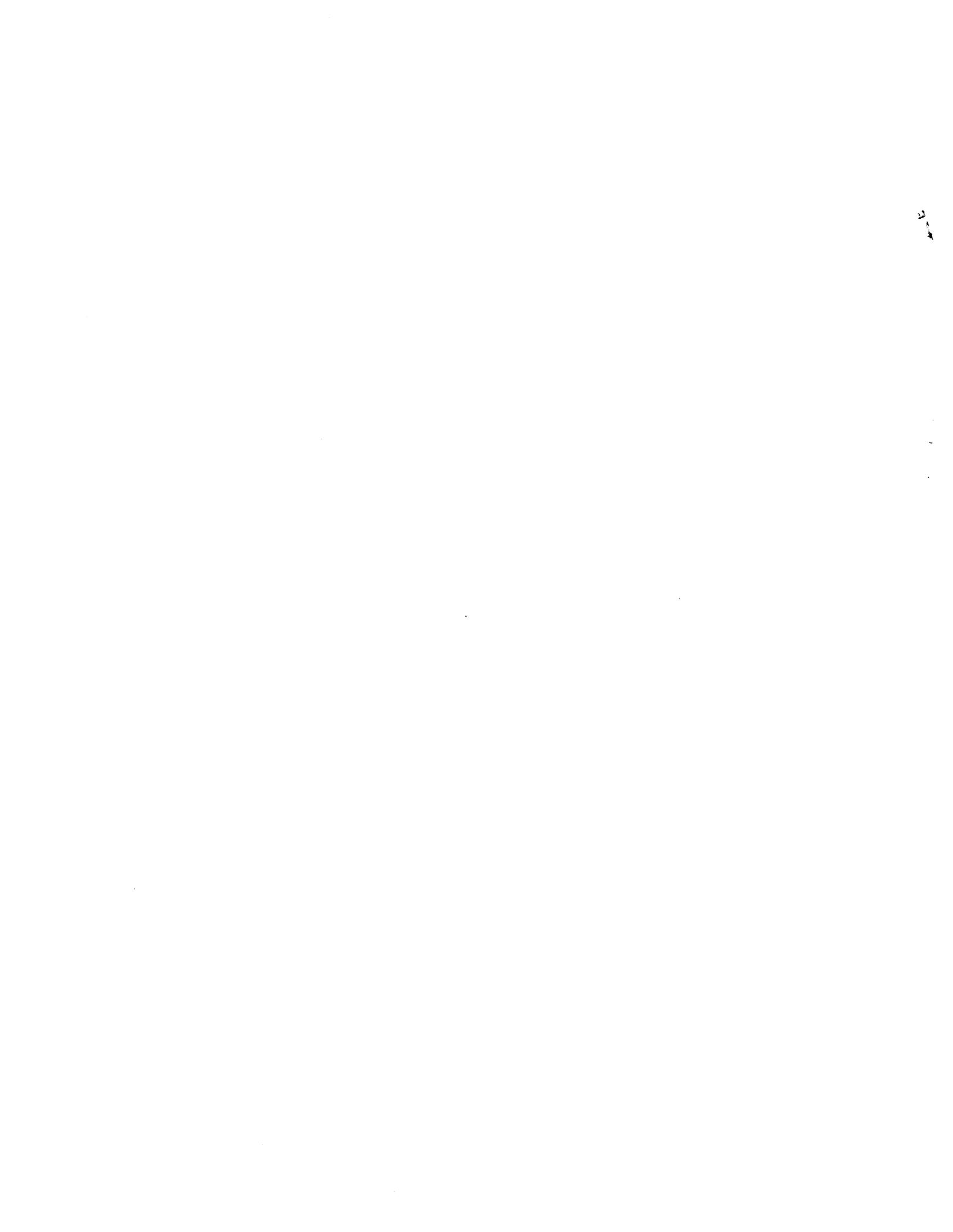
Mitigation Measure: No further mitigation required beyond implementation of existing policies and regulations.

Endnotes to Hazardous Substances Chapter

1. County of Santa Clara, Santa Clara County Hazardous Waste Management Plan, August 1991.
2. County of Santa Clara, op. cit., page 1-12.
3. County of Santa Clara, op. cit., page 5-6.
4. County of Santa Clara, op. cit., page 1-1.
5. County of Santa Clara, op. cit., Siting Map.
6. County of Santa Clara Department of Planning and Development, Alternative Futures: Trends & Choices (Report of Santa Clara Strategic Vision Steering Committee), October 1990, pages 173-175.

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7. See also Draft Llagas Groundwater Basin Nitrate Study, Nitrate Source Area Identification (Santa Clara Valley Water District, March 1994).
8. County of Santa Clara, Ibid.
9. Adapted from the General Plan Update Draft Countywide Health and Safety Chapter, pages 18-24, July 29, 1993.
10. County of Santa Clara, Ibid.
11. County of Santa Clara Planning Office, Santa Clara County General Plan Update, Countywide Health and Safety Chapter, 7/29/93 draft, pages 24-28.
12. County of Santa Clara Unincorporated Area, Household Hazardous Waste Element, Draft March 1994, page HHWE-2.
13. Santa Clara County, Hazardous Waste Management Plan, August 1991, page 3-1.
14. From Table 5G-6 in the Housing Chapter of this EIR.
15. County of Santa Clara Unincorporated Area, Household Hazardous Waste Element, Draft, March 1994, pp. HHWE 48-49.
16. Telephone conversation with Greg Van Wassenhove, Agricultural Commissioner for Santa Clara County, August 22, 1994.
17. Ibid.
18. Telephone conversation with Greg Van Wassenhove, Agricultural Commissioner for Santa Clara County, August 22, 1994.



CHAPTER 5J AVIATION HAZARDS

Environmental Setting

Santa Clara County contains five airports.¹ Three are designated for general aviation uses (Palo Alto, Reid-Hillview, and South County), one is an international airport (San Jose), and one is under federal jurisdiction (Moffett Field). Each airport is required to have its own master plan, and the County has an Airport Land Use Commission to help guide land use decisions in the vicinity of airports. This EIR focuses on the aviation hazards associated with South County Airport in the rural unincorporated portion of the County because it is the only one subject to land use controls of the County.

- **San Jose International Airport** is the only major commercial passenger airport in the county, although it handles significant general aviation as well. This airport is located within the San Jose City limits and is owned and operated by the City of San Jose. The airport occupies 1,050 acres, contains three runways, and serves all sizes and types of aircraft. San Jose International Airport conducted 344,000 operations in 1989, according to State Department of Transportation records. An operation is defined as aircraft landing and takeoff.
- **Moffett Naval Air Station (Moffett Field)** is a federal installation that is located in unincorporated area in the northern portion of the County and is not subject to local jurisdiction. This facility was transferred to the National Aeronautics and Space Administration (NASA) as of July 1, 1994.
- **Palo Alto Airport** is a civilian airport for general aviation located on 182 acres near San Francisco Bay within the Palo Alto City limits. The airport contains one 2,500-foot long runway, and is classified by the Federal Aviation Administration (FAA) as a Basic Utility II airport, meaning that it can serve about 75% of the single-engine and small twin-engine airplanes used for personal and business purposes in the County.
- **Reid-Hillview Airport** is a civilian airport for general aviation located within the San Jose City limits in east San Jose. This airport, also classified as a Basic Utility II facility, occupies 179 acres and contains two runways.

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- **South County Airport** is a civilian airport for general aviation located in an unincorporated area near San Martin. This airport, opened in 1972, occupies 179 acres and contains one runway. The airport is classified as a Basic Utility II facility, and conducted approximately 60,000 aircraft operations in 1990, according to County Aviation Division records. This is the only airport in the rural unincorporated portion of Santa Clara County.

While aviation, and especially commercial aviation, is a relatively safe mode of travel, accidents do occur, threatening the safety of travelers and the population on the ground. Aviation accidents tend to occur in predictable patterns, however, enabling local governments to provide a greater measure of safety to the general public through protective land use planning. Most aviation accidents are the result of adverse meteorological conditions, pilot error, and/or mechanical failures. Most accidents occur for the most part:

- on approach and landing;
- upon takeoff and immediately thereafter; or
- in a pattern clustered along the runway center line, whether in takeoff or landing.

Accidents in mid-air during other phases of air travel are far less common.²

Airport Land Use Commission

In 1970, state legislation established Airport Land Use Commissions (ALUCs) for all counties having airports served by an airline with scheduled service or airports used by the general public. One of the main responsibilities of the ALUC is to minimize the risks to the general public from aviation hazards through land use planning and development review for areas included in "airport influence boundaries." ALUC authority does not extend to federal airports, such as Moffett Field. The General Plan Land Use Elements for all jurisdictions with airports must be consistent with the adopted ALUC Plan, which specifies land use restrictions in areas surrounding airports. The principal approaches employed by the ALUC Plan to increase aviation safety involve:

- limiting population densities and types of land uses in designated safety zones extending from each end of the runway; and
- regulating the height of structures or objects that could pose hazards to air navigation, especially those in the direct flight path of aircraft.

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- minimizing potential distractions to pilots, such as sources of light or glare, and limiting above-ground storage of hazardous materials.

The ALUC reviews land use and development projects of each jurisdiction within the designated referral area ("influence boundaries") of local airports for conformity with ALUC policies. The referral includes the areas that are subject to impacts from airport operations. Recommendations of the ALUC to the local jurisdictions are advisory, but a jurisdiction's legislative body can only "override" the decision of the ALUC with a two-thirds vote of its legislative body.

Draft 1994 General Plan Strategies

The Rural Unincorporated Transportation Chapter of the Draft 1994 General Plan includes a strategy to:

Strategy 1: Limit population densities and land uses within designated safety zones.

Strategy 2: Regulate structures and objects which could be hazardous or distracting to air navigation.

Aviation demands have placed pressure on existing facilities, leading to consideration of alternative sites for North County general aviation traffic. Candidate sites include locations in Coyote Valley and other unincorporated lands east of Gilroy.

Policies and Regulations

A. Plan Policies that Foster Environmental Protection

This section of the EIR discusses existing policies, ordinances and regulations in the County that protect the rural unincorporated environment from aviation hazards. It begins with policies of the 1980 General Plan that are carried forward to the Draft 1994 General Plan. This section continues with a discussion of substantive policy revisions in the 1994 General Plan that are intended to strengthen environmental protection from aviation hazards. It is followed by a discussion of other ordinances and regulations implemented by the County or other levels of government that provide additional protection. It concludes with an assessment of impacts and recommendations for mitigation measures.

Policies from the 1980 General Plan

Aviation safety policies limit the population densities and land uses designated in the airport

safety zones by requiring development to be consistent with that designated in the ALUC land use plans (Policy R-HS 37). They also regulate building height and noise insulation in areas adjacent to the airport. The ALUC has no jurisdiction over existing incompatible land uses. Their jurisdiction is strictly limited to new uses in the vicinity of the airport. The Draft 1994 General Plan contains airport siting policies which were also included in the 1980 General Plan. They address siting new or expanded airports where they are safe and compatible with surrounding land uses (Policy R-TR 15); and assuring that necessary ancillary uses can be appropriately located with respect to new or expanded airports (Policy R-TR 16).

Substantive Policy Changes in the Draft 1994 General Plan

The changes in the Draft 1994 Plan add specific requirements to comply with the ALUC mandated height restrictions and other regulations that ensure safety for those in the airport vicinity (Policy R-HS 38). The Plan also offers a safety measure for the pilots of aircraft using the South County Airport that regulates land uses and structures in the airport vicinity so they are not distracting or would in any way contribute to pilot error (Policy R-HS 39).

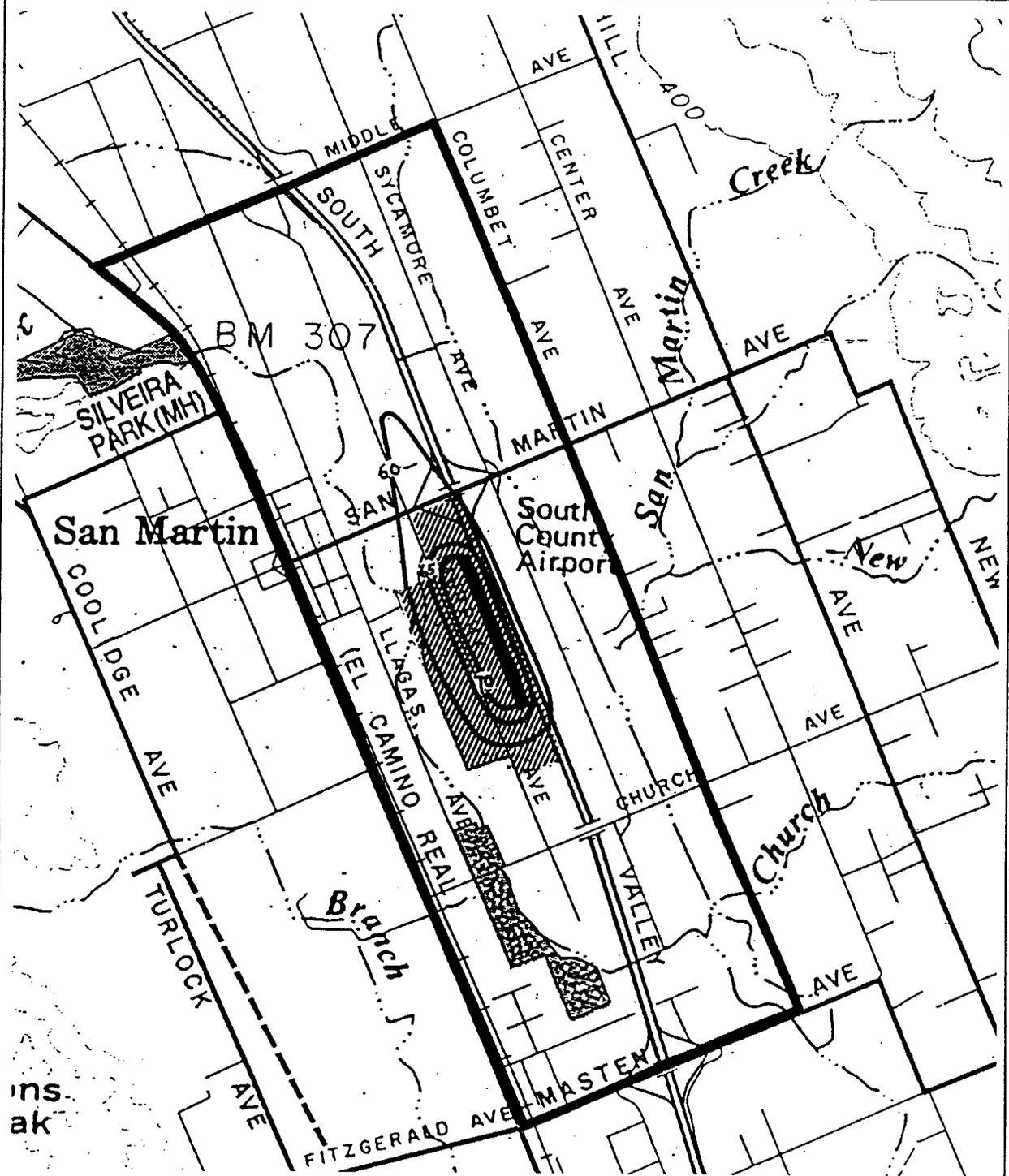
B. Ordinances and Regulations that Reduce Impacts

Santa Clara County ALUC Plan

The Santa Clara County ALUC Land Use Plan, adopted in September 1992, reviews noise impacts and airport safety issues and sets forth policies for land uses in the ALUC referral areas. The policies are divided into four categories:³

- **General Policies.** These policies call upon local jurisdictions to encourage conversion of existing land uses that are incompatible with the ALUC Plan, and to refer proposed projects that fall within ALUC referral boundaries to the ALUC. They also require, as a condition of approval for any project located within the referral area, dedication of an "aviation easement" restricting building heights. The easement is to be dedicated to the jurisdiction owning the airport.
- **Policies Related to Noise Impacts.** These policies establish guidelines for evaluating proposed land uses in areas subject to airport-related noise. The guidelines address both exterior and interior noise.
- **Policies Related to Airport Safety.** These policies establish land use regulations for "safety zones," which are generally rectangular in shape and contiguous to the ends of each airport (see Figures 5J-1 thru 5J-3 for the South County Airport safety zones). The

**Figure 5J-1 South County Airport
ALUC Land Use Referral Boundary**



 NORTH NO SCALE

Sources: Santa Clara County Planning Office
September 1991

LEGEND

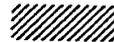
-  ALUC Boundary
-  Airport Property
-  CNEL Contours

Figure 5J-2 South County Airport North Safety Area

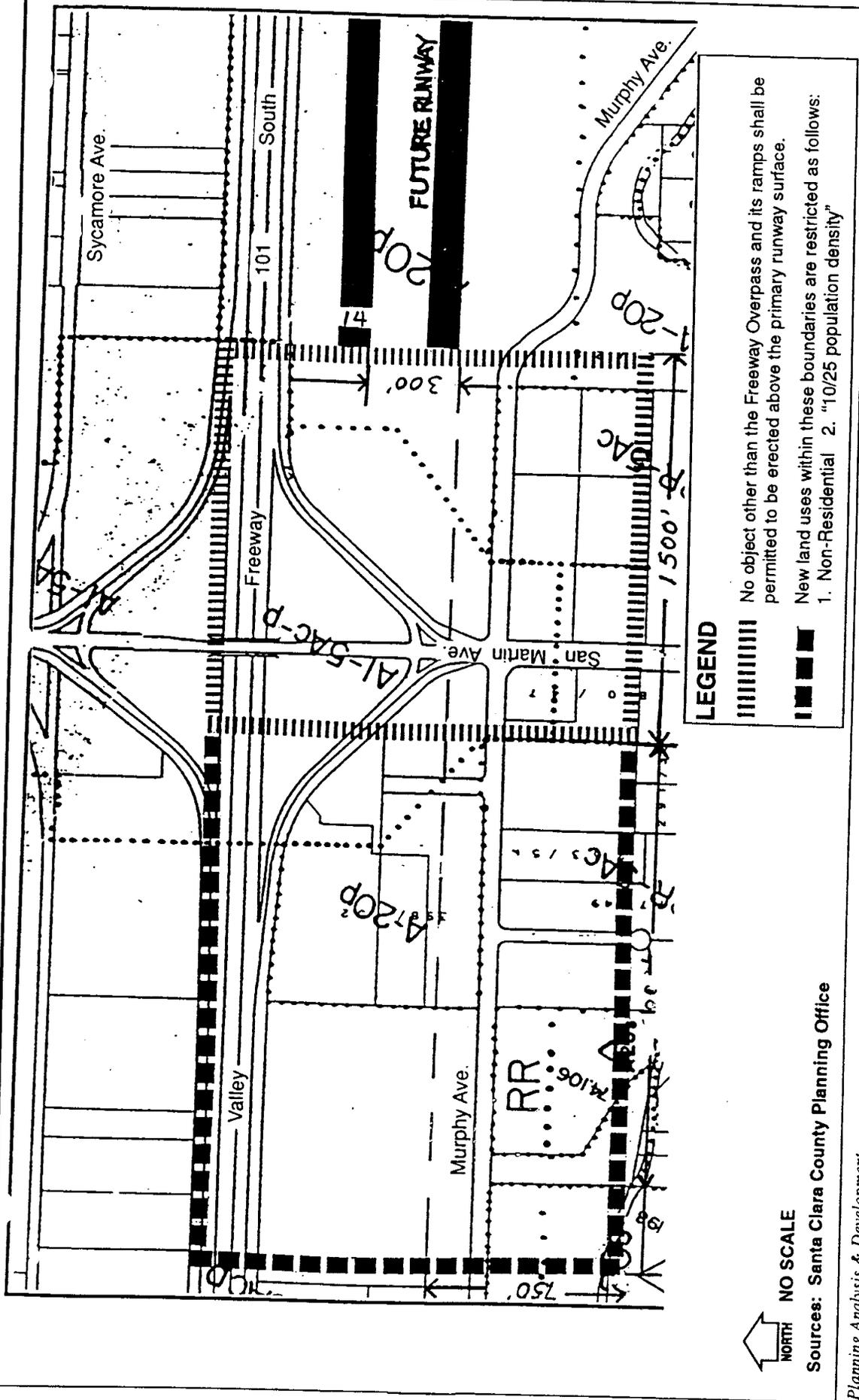
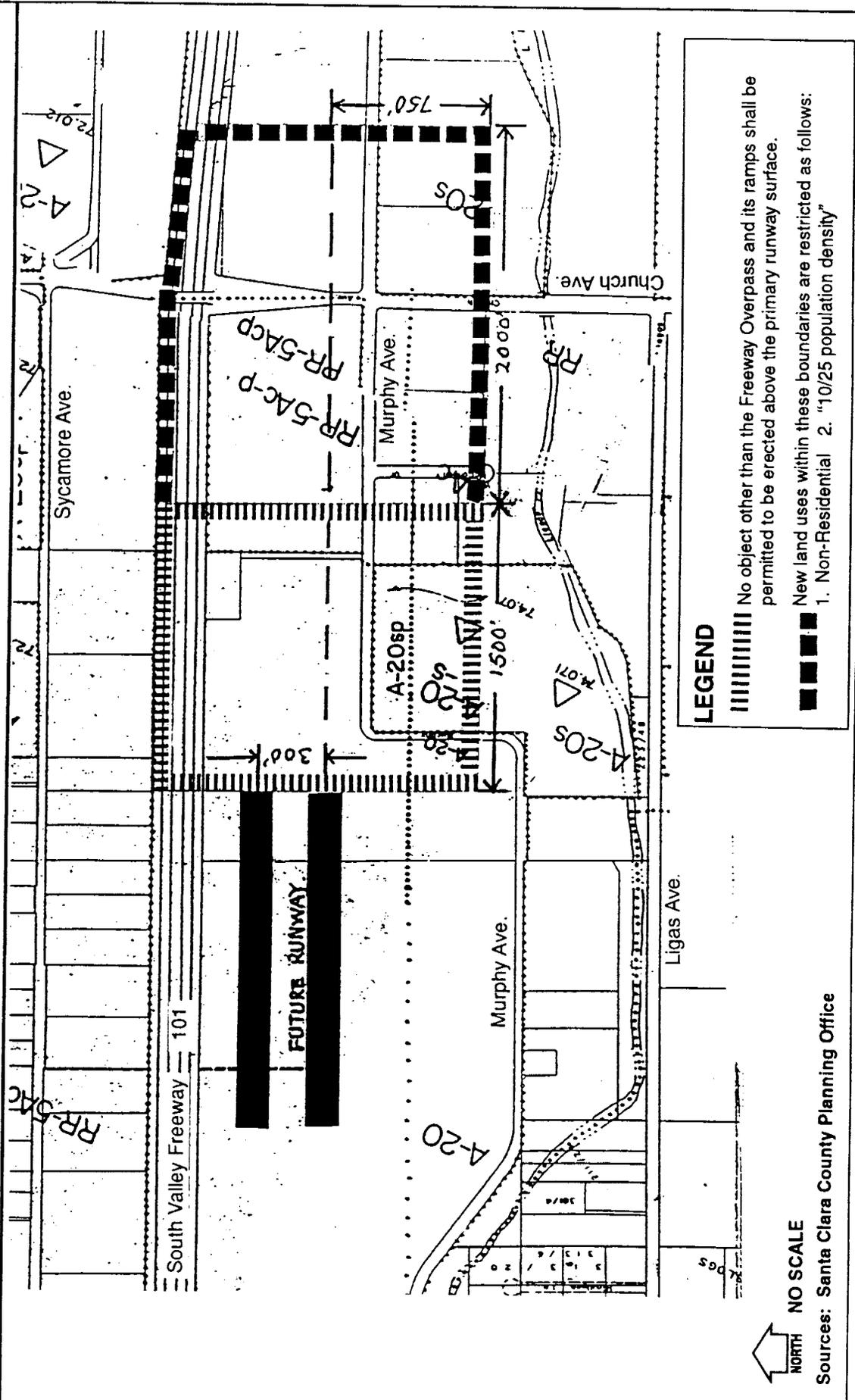


Figure 5J-3 South County Airport South Safety Area



Sources: Santa Clara County Planning Office

Planning Analysis & Development

Santa Clara County Draft 1994 General Plan EIR

safety zones consist of two parts: 1) an inner safety area, the off-site area adjacent to the runway, which should preferably remain undeveloped; and 2) the outer safety area, a second rectangular area surrounding the inner safety area, in which land use and population density are restricted to low density non-residential land uses (e.g., agriculture, recreational parks, equipment storage, automobile parking, single-story warehousing, municipal uses such as sewage treatment plants). The policies establish guidelines for each airport's safety zones.

- **Safety Zone Variance Policies for General Aviation Airports.** These policies establish the guidelines for obtaining a variance from the safety zone requirements.

C. **Significance Criteria**

CEQA does not specifically establish significance criteria for aviation hazards. CEQA *Supplementary Document G* defines a significant land use effect as a conflict with adopted environmental plans and goals of the community where it is located.

Impacts and Mitigation

Impact 1. New or Expanded Airport Facilities. The Draft 1994 General Plan recognizes the possible need for a new or expanded general aviation airport to relieve air traffic demand in the north County area. Should there be a proposal for a new or expanded airport in the rural unincorporated portions of the South County, a new or expanded airport could have significant impacts related to noise, land use, safety and growth-inducement. Specific development of new or expanded airport facilities is speculative at this time. *If the existing and proposed policies noted above are implemented, they have the potential to reduce any future impacts but it cannot now be determined whether they would be reduced to a level of significance.*

Mitigation Measure: No further mitigation is possible at this time.

Impact 2. Airport Safety. It is possible for the public to be exposed to aviation hazards in areas surrounding airport facilities. Establishing and enforcing safety restrictions around the South County Airport is a cooperative undertaking by the Federal Aviation Administration (FAA), the ALUC, and Santa Clara County. Most potential safety problems may be alleviated through protective land-use planning. The Draft 1994 General Plan assures that South County Airport practices would be in keeping with the ALUC Plan and its regulations regarding height, noise, and maintenance of safety zones (Policy R-HS 37-38). The ALUC also ensures

CHAPTER 5J: *Aviation Hazards*

that the outer safety zone area be restricted to non-residential land uses further decreasing the possibility of exposure to aviation hazards.

Proposed policy R HS 39 limits distracting land uses or structures in the airport vicinity, which would strengthen airport safety by decreasing the potential for an accident. These restrictions include land uses that may create reflection and glare, equipment that causes electrical interference, facilities that attract large number of birds, or other actions that reduce visibility or distract pilots. *Airport safety would be a less than significant impact if the policies and regulations of the FAA, ALUC, and County are implemented.*

Mitigation Measure: No further mitigation is required.

Endnotes to Aviation Hazards Chapter

1. Santa Clara County Airport Land Use Commission, Land Use Plan for Areas Surrounding Santa Clara County Airports, September 1992, pages 6-7.
2. General Plan Update, Countywide Health and Safety Chapter, pages 56-57, July 29, 1993.
3. Santa Clara County Airport Land Use Commission, Land Use Plan for Areas Surrounding Santa Clara County Airports, September 1992, pages 31-36.

CHAPTER 5K GEOLOGY

Environmental Setting

Topography

Santa Clara County, located at the southern end of San Francisco Bay, is about 35 miles wide (east-west) and over 40 miles long (north-south). The central portion of the County contains the Santa Clara Valley, which is oriented northwest-southeast and drains both into San Francisco and Monterey Bays. The valley is flanked on the east by the Diablo Range and on the west by the Santa Cruz Mountains.

The eastern half of the County includes ridges and valleys of the Diablo Range, which are generally oriented northwest-southeast. Ridge crests have elevations of 2,000 to 4,000 feet above mean sea level (msl). The highest point is Copernicus Peak near Mount Hamilton, at 4,372 feet msl.

The Santa Cruz Mountains cover the extreme western portion of the County and are also oriented northwest-southeast. The highest point is Loma Prieta, at 3,791 feet msl. These mountains generally have one main ridge along the County border, in contrast to the numerous ridges and valleys of The Diablo Range in the east county.

The Santa Clara Valley varies in width from about 16 miles at its north end, adjacent to San Francisco Bay, to about two miles at Coyote, about 12 miles south of Downtown San Jose. The southernmost two-thirds of the valley is generally narrow, ranging up to six miles in width. The valley bottom is generally flat, with slope gradients of less than five percent except where scattered small hills and stream courses provide relief.¹

Geology

Santa Clara County is composed of folded and faulted sedimentary and volcanic rocks of the Central California Coast Ranges and more recent alluvial and Bay deposits in lower valley areas. The Diablo Range includes primarily sandstone, shale, chert and serpentine of the Franciscan Assemblage of Jurassic to Cretaceous age (208 to 66 million years ago). Lesser amounts of Monterey formation shale, Santa Clara formation gravels and sands, and Briones formation sandstone of Tertiary age (66 to 2 million years ago) are also present.²

The Santa Clara Valley is underlain by Quaternary-age (less than two million years old) alluvial deposits, which are up to several hundred feet deep. At the extreme northern end of the valley, recent bay deposits are present. The Santa Cruz Mountains are composed primarily of Franciscan Assemblage sandstone, shale, chert and serpentine with lesser amounts of Santa Clara, Purisima, San Lorenzo, Monterey, and Vaqueros formations of Tertiary age also occurring. The active San Andreas Fault passes through the center of the Santa Cruz Mountains along their long axis.

The Franciscan Assemblage was deposited originally in a deep marine trench off the California Coast. As a result of convergence of the Pacific and North American plates, those sediments were folded, faulted and accreted onto the continental margin, forming the Coast Ranges. During the Tertiary period, marine and non-marine sediments were deposited in portions of the Coast ranges, creating the Tertiary formations mentioned above. Also during the Tertiary period, the Calaveras and Hayward Faults divided the County into eastern and western blocks. The western block tilted and its low-lying eastern portion formed the Santa Clara Valley, which has since accumulated alluvial deposits.

Seismicity

The San Francisco Bay region is one of the most seismically active regions in the United States. Three major active faults cross Santa Clara County: the San Andreas, Calaveras, and Hayward Faults. Each of them has generated significant earthquakes throughout recorded history (200 years). In addition, other active secondary faults and potentially active faults are located within Santa Clara County's borders. The active Calaveras and Hayward Faults generally form the western boundary of the Diablo Range in Santa Clara County.

Table 5K-1 identifies all active and potentially active faults in Santa Clara County, as indicated by the County Geologist and mapped on the County's Geologic Hazard Maps of 1991. Those faults identified as being "de-zoned" were once identified as potentially active by the State and/or County, but have since been removed from an Alquist Priolo Special Study zone as a result of more up-to-date information. Figure 5K-1 shows the distribution of significant earthquakes that have been recorded in the region, and Figure 5K-2 shows the relative seismic stability of areas throughout the county. As shown in the latter figure, hillside and bayland areas as well as portions of the valley floor are classified as having major geotechnical hazards, with site investigations generally mandatory for new development in these areas.

The most recent significant seismic event to affect Santa Clara County was the Loma Prieta Earthquake of October 17, 1989, which registered 7.1 on the Richter Scale and accounted for 62 deaths, about 4,000 serious injuries, and almost \$6,000,000,000 in damage in the Bay Area.

TABLE 5K-1
Active and Potentially Active Faults in Santa Clara County

Fault	Active	Potentially Active by State	Potentially Active by County
Animas		de-zoned in 1982	X
Arroyo Aguague		de-zoned in 1982	X
Berrocal	X (by County)		
Berryessa		de-zoned in 1982	de-zoned in 1991
Butano	X		
Calaveras	X		
Clayton		de-zoned in 1982	X
Coyote Creek		de-zoned in 1982	X
Crosley	X		
Evergreen		de-zoned in 1982	X
Greenville	X		
Hayward	X		
Monte Vista	X (by County)		
Piercy	X (by County)	de-zoned in 1982	
Quimby		de-zoned in 1982	de-zoned in 1991
San Andreas	X		
Sargent	X ¹		
Shannon			X
Silver Creek		de-zoned in 1982	X
Stanford ²			never zoned

Table Notes:

¹ Southern 1/3 by State; entire by county

² Classified as possibly active by U.S. Geological Survey (USGS)

Source: County of Santa Clara Planning Office

Figure 5K-1 Regional Seismicity Map

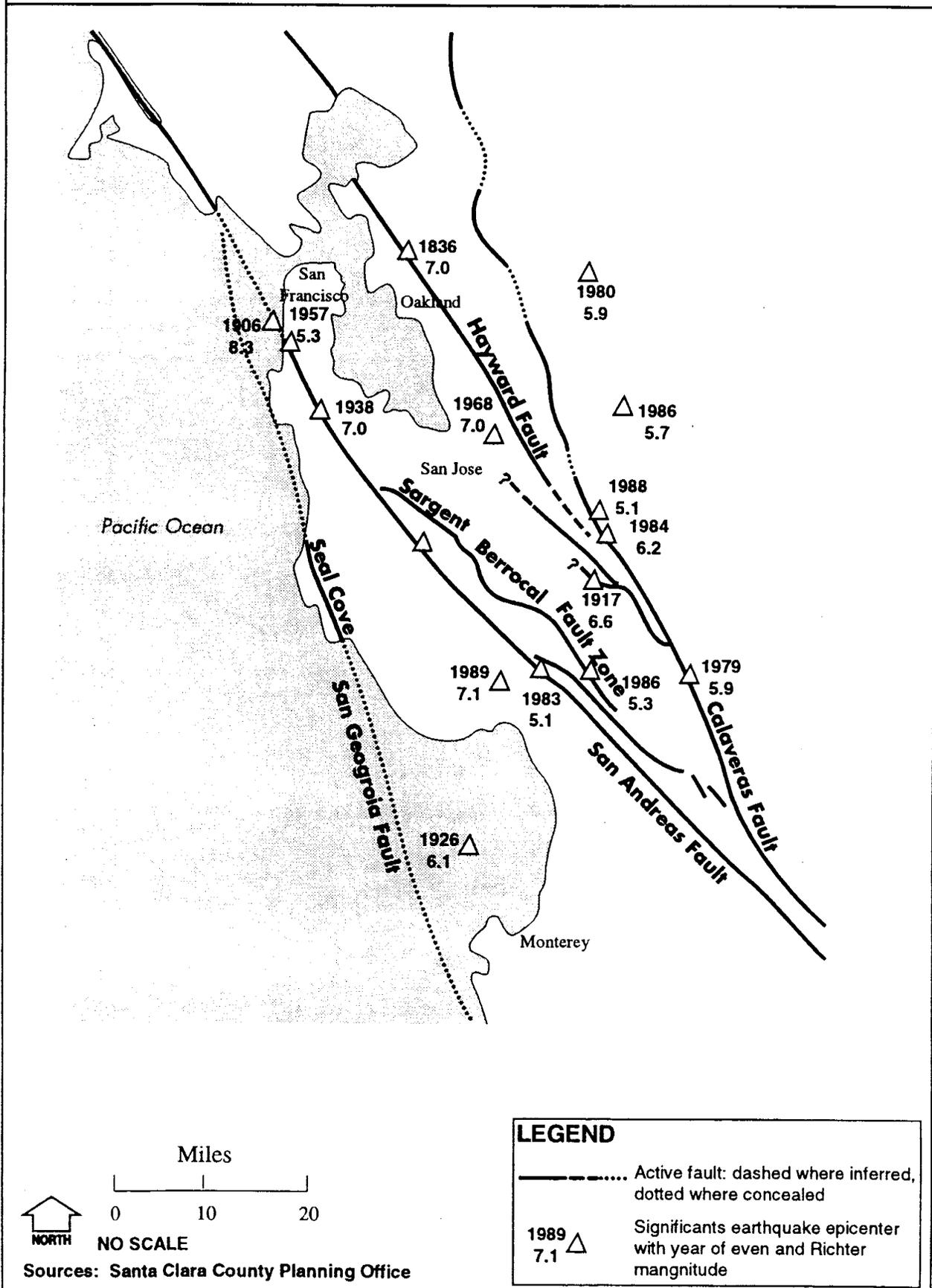
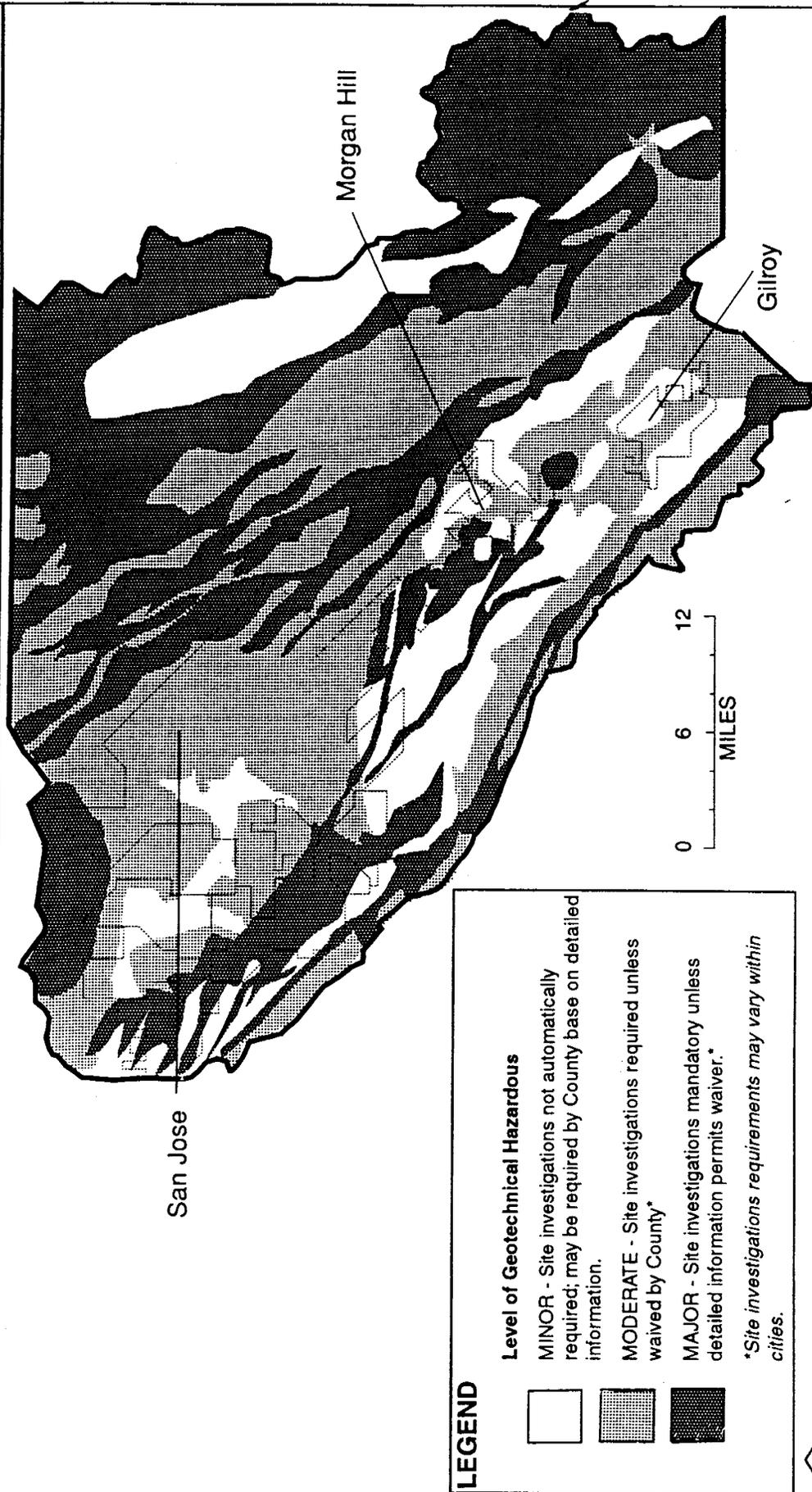


Figure 5K-2 Relative Seismic Stability



NO SCALE

Sources: Santa Clara County Planning Office

More detailed information regarding seismic stability is available from the County Planning Department and the County Geologist.

The epicenter of the earthquake was centered in the Santa Cruz Mountains in neighboring Santa Cruz County, approximately 25 miles south of the City of San Jose.

It was originally thought that the earthquake was centered on the San Andreas Fault, where earthquakes result from strain built up as the uneven edges of the North American Plate and Pacific Plate stick and then release in a sudden lateral lurch as the two sides of the fault move past each other. However, many geologists now theorize that the Loma Prieta quake was not centered on the San Andreas, but on a nearby "thrust" fault that is caused by the collision and squeezing together of the two plates. Such "thrust" faults are tilted on a diagonal rather than lateral, and can result in as much upward movement as sideways movement.

Many geologists claim that the existence of "thrust" faults may help explain the way the ground southwest of the fault rose above, as much as it slid past, the ground on the other side during the Loma Prieta earthquake. This upward ground displacement differs significantly from the historical surface ruptures along most segments of the San Andreas Fault, which have been dominantly lateral movements.³

Following the Loma Prieta earthquake, the Working Group on California Earthquake Probabilities, in association with the USGS, forecast that there is a 67% chance for a least one earthquake of magnitude 7 or larger in the San Francisco Bay Area between 1990 and 2020. Such an earthquake most likely will be located closer to densely populated areas than the Loma Prieta earthquake.⁴

Ground-Shaking

The faults identified above could generate earthquakes that would result in strong ground-shaking. The maximum bedrock acceleration in the County due to seismic activity is estimated at greater than 0.5g, where g is the acceleration due to gravity.⁵ In the Loma Prieta earthquake accelerations were in the range of 1.0g along ridge crests near the epicenter according to some observers.⁶ In general, ground-shaking would be more severe in areas underlain by loose unconsolidated soils than in areas underlain by bedrock. The USGS has published a map, MF-709, estimating the intensity of ground-shaking expected during a large earthquake on the San Andreas or Hayward Faults in various portions of the County.⁷ More recent maps prepared by the Association of Bay Area Governments (ABAG) indicate the potential ground-shaking in the County and region from an earthquake on the San Andreas and Hayward Faults.⁸

The primary damage from earthquakes results from ground-shaking. It is reasonable to assume that structures in the County and throughout the region will experience high intensity ground-shaking at least once within the design life of the structure. Damage to buildings and other

CHAPTER 5K: *Geology*

structures is the primary cause of death, injury, and financial loss during a large earthquake. Buildings designed and constructed according to modern codes since the mid 1970's have generally performed very well during earthquakes. Certain types of buildings, especially older ones (built before the adoption of the stricter 1976 UBC), are potentially hazardous. Unreinforced brick buildings pose a particular hazard even in moderate earthquakes.⁹

Modern criteria for seismic design and construction have been included in the Uniform Building Code (UBC) since 1973. The 1991 edition of the UBC has the most up-to-date building requirements. Construction of nearly all new buildings in the County and in California complies with this or a similar code. The code requires even greater strength for essential facilities and for sites on soft soil where ground-shaking is intensified. In addition, the Unreinforced Masonry Building Law required all local governments to conduct an inventory of existing unreinforced masonry buildings and to develop a mitigation plan by January of 1990.¹⁰

Ground Surface Rupture

Ground surface rupture (i.e., cracks in the ground surface) could occur along fault traces during a major earthquake. This hazard is most likely along the traces of known active or potentially active faults like those listed above. Although unlikely, it is possible that surface rupture could occur along an unknown fault trace.

The California Division of Mines and Geology (CDMG) has mapped the surface traces of known faults and designated special studies zones along those traces believed active, as required by the Alquist-Priolo Special Studies Act of 1972. Special studies zones have been mapped on USGS 7.5 minute topographic quadrangles.¹¹

Since the Loma Prieta Earthquake, the Seismic Hazard Mapping Act of 1990 was passed requiring local governments to map areas susceptible to the hazards of enhanced ground-shaking, liquefaction, earthquake-induced landslides, and other ground failures associated with earthquakes. In Santa Clara County, the County Geologist maintains County Geologic Hazard Maps at a scale of 1" = 500' which identify potential geologic hazard areas in the County. These include, but are not limited to, areas with high potential for earthquake-induced landsliding, ground displacement along fault traces, liquefaction, and differential settlement.

Secondary Seismic Hazards

Secondary seismic hazards from ground-shaking include liquefaction, settlement, lateral spreading, lurching, landslides, tsunamis and seiches.

Liquefaction affects loose, saturated sands and silts with a low clay content. In these areas, seismic ground-shaking causes elevated pore pressures within the groundwater and loss of strength by the sand or silt. In lands subject to liquefaction, ground-shaking can cause the earth to move laterally; to lose its supporting strength (allowing heavy structures to sink and light, buried objects to rise); to settle differentially; or to collapse, often with a rotating force, along a free face such as a creek embankment.

Figure 5K-3 shows areas in the County that are subject to liquefaction. Alluvial deposits of the Santa Clara Valley that have a high groundwater table may be susceptible to liquefaction. Additionally, loose river deposits in the valleys of the Santa Cruz Mountains and the Diablo Range may be locally prone to liquefaction. Settlement and lateral spreading affect loose soils, especially those with high clay content and shallow groundwater. The Bay muds at the northernmost end of the County are extremely susceptible to these hazards.

Differential settlement and lateral spreading can occur due to ground-shaking in areas subject to liquefaction, causing severe damage to structures. **Lurching** (i.e., the horizontal movement of soils) is likely along river channels, particularly where tall vertical banks exist, and earthen embankments, such as poorly built road fills.

A **tsunami** is an earthquake-induced ocean wave that can have a run-up of several to tens of feet along shorelines. The Bay shore of Santa Clara County is subject to minor hazards from a tsunami, as substantial attenuation of run-up would occur for a tsunami entering the Golden Gate.

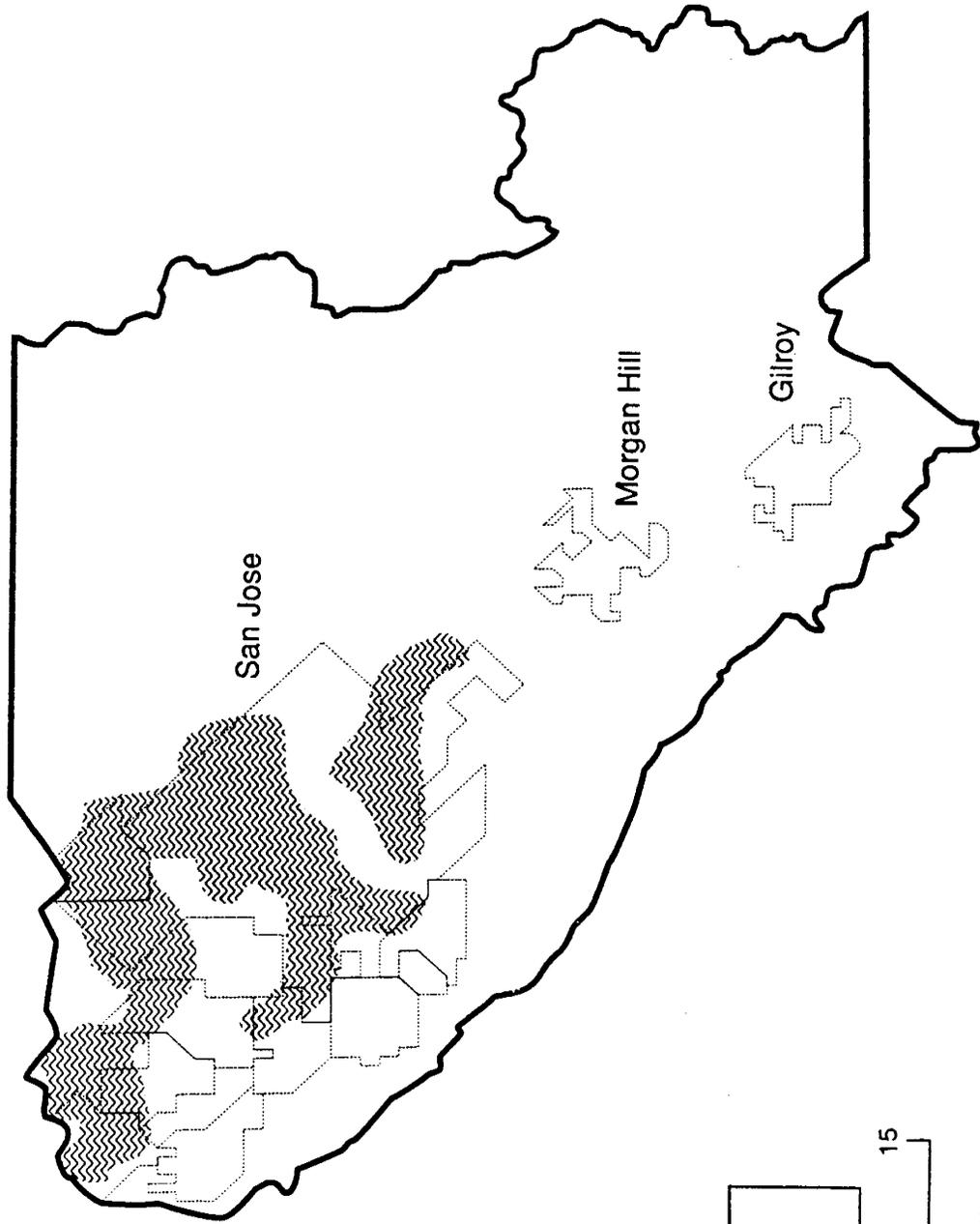
Seiches are oscillatory waves occurring in a closed water body due to seismic activity. Experience from the 1906 earthquake indicates that a substantial seiche is unlikely in the Bay. Reservoirs and lakes in the County could be prone to seiche formation.

The California Division of Mines and Geology has prepared a study of potential seismic hazards in Santa Clara County, which analyzes the likelihood of secondary seismic hazards in various parts of the County.¹² The Federal Insurance Administration has conducted a Type 16 Flood Insurance Study for Tsunamis in San Francisco Bay that includes detailed maps of projected tsunami run-up.¹³

Slope Instability

The two major types of slope instability are landslides and soil creep. These slope failures can result from natural causes, such as undercutting of hillsides by streams, accumulation of thick colluvial mantles in steep mountain swales, and from human causes, such as oversteepening of

Figure 5K-3 Areas of Liquefaction



LEGEND
Areas Subject to Liquefaction

0 15
MILES

Sources: Santa Clara County Planning Office

Planning Analysis & Development

Santa Clara County Draft 1994 General Plan EIR

hillsides and removal of vegetative cover. The greatest probability of slope failure is in areas of existing and past landslide activity. Temporarily dormant landslide masses and deposits can be reactivated by heavy rainfall, earthquakes, construction activity, etc. However, landslides can also affect areas without a history of slope failure.

Unstable hillsides occur in steeper portions of the Santa Cruz Mountains and the Diablo Range. As shown in Figure 5K-4, most of the unincorporated area of the County contains areas with slopes of 15% or more.

Landslides: Landslide potential is one of the most significant types of land instability that affects construction in undeveloped areas, especially in the steeper areas of the county. While some landslides may occur as sudden, catastrophic events, the typical active landslide will move fairly slowly, at a rate of a few inches per year, with the potential to overtake roads, driveways, utilities, and structures over time. In the short term, structures on active landslides may suffer foundation damage, structural separation, uneven settlement, damage to water pipes and other utilities, and other effects that cumulatively pose a major risk to life and property.¹⁴

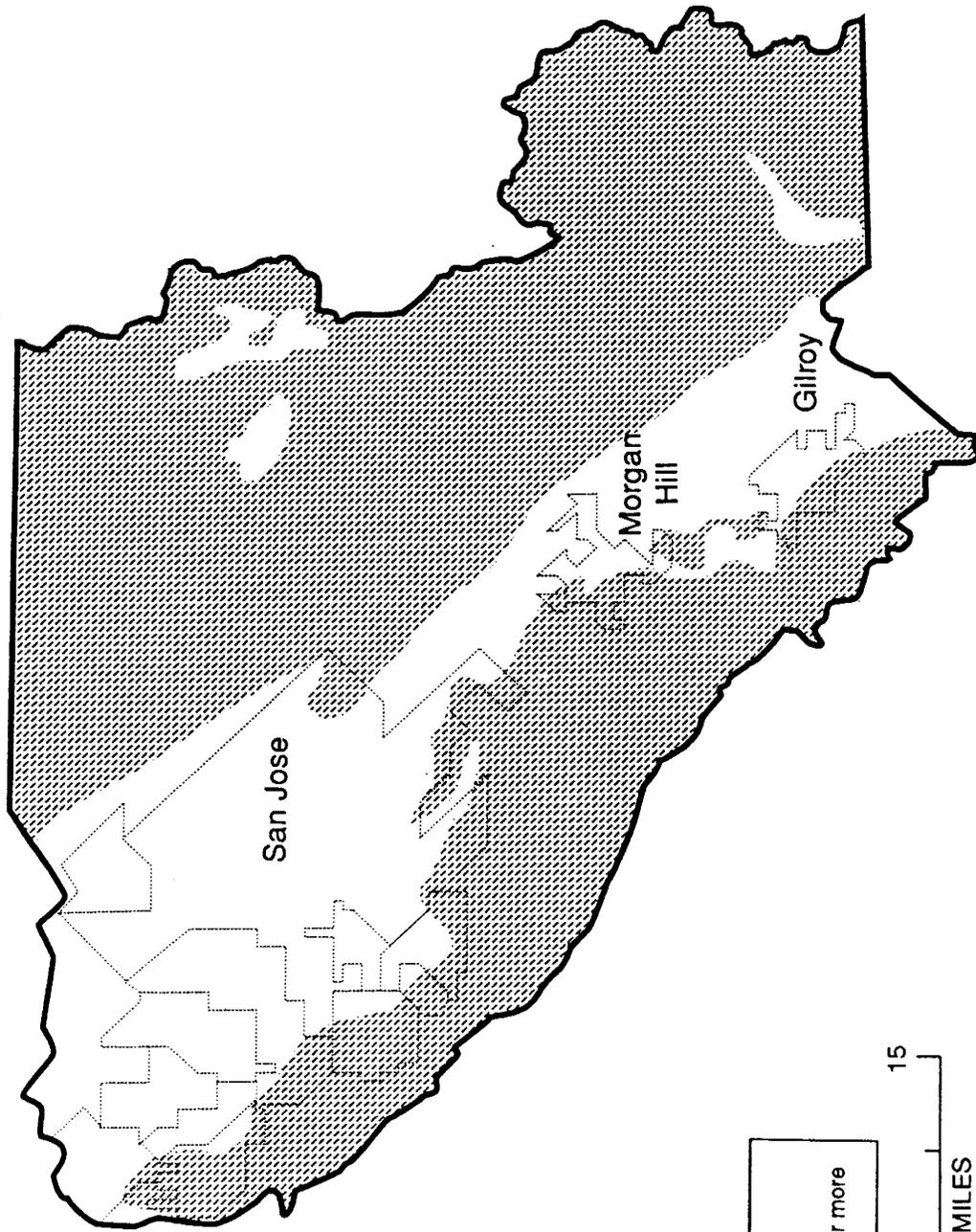
Soil Creep: Soil creep is a form of failure characterized by very slow, differential downhill settlement of a slope over a given area. Soils "creep" downhill due to differential rates of expansion and contraction, and due to gravity. On most slopes steep enough to experience soil creep, the depth of material is not thick enough nor the rate of creep rapid enough to pose a significant hazard to development. However, creep rates of 0.5 inches per year have been observed on slopes with a gradient of 15%.¹⁵

Soils

The soils of Santa Clara County can be divided into five broad categories. Group I soils have formed on mud at the bay's edge and are affected by tidal action. Group II soils are located on poorly drained alluvium generally north of downtown San Jose and southeast of Gilroy. Group III soils cover the majority of the Santa Clara Valley. Those soils have formed on alluvial plains and fans and are well to somewhat excessively drained. Group IV soils are located at the edges of the Santa Clara Valley on alluvial terraces and fans. The subsoil is slowly to very slowly permeable. Group V soils have formed on bedrock of the Santa Cruz Mountains and the Diablo Range and are usually well drained. The erosion hazard of upland soil is moderate to high.¹⁶

The U.S. Soil Conservation Service mapped soils of the County for a 1968 report, that examined land capability and hydrologic, vegetative, and engineering properties of soils. A subsequent report prepared by the SCS in 1974 mapped soils of the eastern portion of the County.¹⁷

Figure 5K-4 Areas of 15% Slope and More



LEGEND
Areas of 15% slope or more

NORTH
NO SCALE
0 15
MILES

Sources: Santa Clara County Planning Office

Planning Analysis & Development

Santa Clara County Draft 1994 General Plan EIR

Erosion

Erosion is the wearing away of the land surface by running water. The rate of erosion is related to the gradient of the land and water velocity. To a lesser extent, erosion can also be caused by wind, or geologic agents in the forms of slips and slides, especially in unstable areas. Some erosion is natural, while some is accelerated due to human activities such as farming, surface mining, grading for development projects, and recreational activities. Erosion can also occur as a result of wildfires and due to poor range management resulting in overgrazing of hillside areas.

In Santa Clara County, soil is carried by surface runoff into streams and reservoirs and, eventually, San Francisco Bay. Soil carries with it pollutants such as oil and grease, chemicals, fertilizers, animal wastes, and bacteria, all of which threaten water quality. Sediment is, by volume, the largest single water pollutant that can spoil fish habitat in streams and water bodies, reduce the storage capacity of reservoirs, and degrade the water quality of streams, lakes, and reservoirs.¹⁸

Moderately steep to very steep uplands in the hillside areas of the County are classified as high to very high erosion hazard areas. These lands are best suited for limited rangeland, low-level recreation, watersheds, and wildlife habitat.¹⁹ To a lesser extent, the agricultural lands of the South County area also pose a threat for erosion.

Draft 1994 General Plan Strategies

The Rural Unincorporated Health and Safety Chapter contains strategies to:²⁰

- Strategy 1: Inventory hazards and monitor changing conditions.*
- Strategy 2: Minimize resident population within high hazard areas.*
- Strategy 3: Design, locate and regulate development to avoid or withstand hazards.*
- Strategy 4: Reduce the magnitude of the hazard.*
- Strategy 5: Provide public information regarding natural hazards.*

Policies and Regulations

This section of the EIR discusses existing policies, ordinances and regulations in the County that protect the rural unincorporated environment and its residents from impacts relating to geological and natural hazards. It summarizes the policies of the 1980 General Plan that are carried forward to the Draft 1994 General Plan with respect to geologic hazards. No substantive revisions were made to the Draft 1994 General Plan with respect to geologic hazards. Other ordinances and regulations in the County that can reduce or eliminate impacts from geologic hazards are discussed next. This body of controls provide comprehensive tools to protect the residents and environment in the rural unincorporated area from geologic impacts.

A. Plan Policies that Foster Environmental Protection

Policies from the 1980 General Plan

Policies require that the County maintain up-to-date mapping of geologic and other natural hazard areas and that these areas be given land use designations to minimize the public's exposure to these areas. [Policies R-HS 6-7]

In any rural area with designated hazards, projects or development should be located to avoid or reduce the risk and to protect neighboring properties from risk. Policies R-HS 9-10 and R-HS 15-18 would not allow new building sites on a fault trace, active landslide or other known hazard. It also requires that subdivisions be designed to minimize placement of roads and infrastructure on areas designated as unsuitable by the County Geologist.

Policies R-HS 14-15 deal with the siting of public facilities. These policies ensure that facilities such as water supply lines, utilities, police and fire stations or public gathering places are not sited in an area that could jeopardize their function or endanger the public.

To protect areas with landslide potential, Policy R-HS19 prohibits activities or land alterations which might increase the hazard potential.

B. Ordinances and Regulations that Reduce Impacts

Geologic Ordinance

The grading ordinance establishes requirements for geologic evaluation of projects based on proposed land use and adopted official County Geologic Hazard Maps. It further establishes procedures to enforce these requirements, including rules and regulations for the development of land which is on or adjacent to known potentially hazardous areas. Projects may require a

geologic investigation by a qualified professional depending on the designation on the Geologic Hazards Maps. This geologic investigation must be reviewed and approved by the County geologist prior to any project approval.

Grading Ordinance

This ordinance establishes minimum standards for grading projects in order to control erosion and the production of sediment, as well as to control other related environmental damage such as the de-stabilization and/or scarring of hillsides. It regulates the construction and maintenance of cuts and fills and the clearing of vegetation. It also requires the revegetation of cleared areas and the provision of proper drainage control to minimize instability.

Uniform Building Code

The UBC provides minimum standards to safeguard life, limb, health, property and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location and maintenance of all buildings and structures within the County's jurisdiction. It includes the latest seismic standards.

C. Significance Criteria

According to the CEQA Guidelines *Supplementary Document G (r)*, *exposure of people or structures to major geological hazards* is considered a significant adverse impact.

Impacts and Mitigation

Impact 1. Landslides. Development in an area of potentially unstable land could result in structural damage and loss of life from landslides. The East Foothills of the Diablo Range and the Santa Cruz Mountains to the west both have known areas of slope instability. Much of the rural area of the County is characterized by moderate to steep slopes and depending on the soils and geology, active landslides can occur. This type of landslide may move slowly causing foundation damage, structural separation or damage to pipes and utilities. Landslide activity may also occur as a result of a seismic event. It may not be possible to stabilize active landslides depending upon their rate of movement.

Figure 5K-4 shows areas of the County with slope gradients of 15% or greater. This is an indication of locations at which landslides and soils creep are most likely to occur. These areas are designated Hillsides, Ranchlands and Public

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Lands for the most part, although there are areas of Rural Residential (RR) and Educational/Institutional (EI). The Hillside and Ranchlands have the lowest densities in the County, ranging from 20 to 160 acres minimum parcel size. Were development or human habitation proposed for these areas there would be, in most cases, ample land to site them in the least hazardous portion of a parcel. However, some landslides cover hundreds of acres; such land offers no good siting choices.

The Rural Residential (RR) designations in hilly areas could result in potentially greater exposure of humans to landslides than would development in the Hillside (H) and Ranchlands (R) areas. First, Rural Residential is the area to which much of the growth under the Plan would be directed; and second, the minimum parcel sizes could be 5 -20 acres, depending on the average slope. However, the steeper the slope, the larger the required minimum parcel size would be. As steepness is an indicator of the potential for landslides, the larger parcel sizes and the ability to cluster increases the possibility of locating a structure on stable land.

The steep areas designated Educational/Institutional (E/I) include Lick Observatory and Stanford University. The owner of the Lick Observatory lands, the University of California at Berkeley, will not initiate any development which would impact the operation of the observatory. All steep lands under the ownership of Stanford University are limited to open space and low density academic uses by Stanford's General Use Permit.

Lands designated as (PL) Public Lands and (P) Regional Parks are not likely to have development so they would not increase human exposure to landslides.

Siting choices combined with policies R-HS 9-10 and R-HS 15-19 substantially reduce the risk of exposure to landslide hazards. Policy R-HS 9, for example, prohibits new habitable structures in areas of active landslides. Policy R-HS 16 states that no new building shall be approved on an active landslide that poses a significant risk. *If all County policies related to development in landslide-prone areas are implemented, there would be no significant impact.*

Mitigation Measure: No further mitigation is required.

Impact 2. Soil Creep: Soil creep is characterized by very slow downhill settlement of a slope over a given area. As with landslides, creep occurs in steep hillside areas. Thus, it is likely to cause impacts in the same land use designations and under the

same conditions as discussed in Impact 1 above. In an area of soil creep it is possible to stabilize a slope and create a suitable building site. With proper inventory and mapping of natural hazard areas recommended by the Draft General Plan, development in areas of potential soil creep either could be avoided or resolved with stabilization engineering. The low resident population of Hillside and Ranchlands would minimize human exposure to this hazard.

The County's Geologic Ordinance requires subdivisions with proposed building sites on unstable lands to be approved by the County Geologist. It also requires that all building permits be signed by the County Geologist, indicating review and satisfactory treatment for soil creep. These practices minimize potential impacts due to land instability. *If all geologic regulations and General Plan policies are implemented, land instability would be a less than significant impact.*

Mitigation Measure: No further mitigation is required.

Impact 3. Seismic Hazards

A. Earthquakes: The Calaveras, the San Andreas and Hayward faults have the potential for catastrophic devastation in Santa Clara County. The presence of older structures, structures built on faults or landslides, structures not built in conformance with building safety standards, or those built of unreinforced masonry all pose serious safety risks. Commercial structures of unreinforced masonry are required by state law to undergo a structural analysis and possible seismic retrofit. The County can only recommend that residential structures undergo a seismic analysis. The risk to life and property by earthquake can be somewhat mitigated through geologic land evaluation, proper siting, and adequate building standards. The County requires that all building permits be approved by the County Geologist to demonstrate building suitability to withstand major earthquakes and minimization of hazards. However, should another earthquake occur with a magnitude of 7.0 or greater, it will cause damage and loss of life. The potential for devastation is compounded by the unpredictability of earthquakes.

The Calaveras fault runs along the eastern side of the Diablo Range through Regional Park lands, Ranchlands and Hillside areas. These areas are relatively sparsely occupied, so the risk of human exposure is small.

The San Andreas fault runs along the western border of the County which

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contains lands designated Hillside and Public Lands. The majority of lands along this fault can not be further developed due to slope inaccessibility, or public ownership. The low densities permitted would minimize the risk of human exposure to earthquakes in this area.

The Hayward fault runs along the east foothills of the County. Most of this land is in Hillside or Ranchland designations with 20-160 minimum parcel size, and some is in Public Lands. Residential density is low and thus the risk of human exposure is low.

B. Ground Shaking: Ground shaking may be experienced as shaking or violent shuddering or a rocking motion of the earth associated with earthquakes. The extent of ground shaking can be related to the intensity of the quake, and the geology and soils of the area. The greatest impacts would be likely to occur on fills or areas of fine soil and in the alluvial soils in the Santa Clara Valley. The Baylands in the northern portion of the County (areas of fill) are for the most part contained in Resource Conservation areas with little or no potential for human habitation. Rural Residential lands underlain by alluvial soil would experience substantial ground shaking in a major earthquake. Agriculture and Hillside areas would be locations of low density development. Ridgelines also may be affected by violent shaking. Building permits for new development in all areas would require approval of the County Geologist.

C. Ground failure: Ground failure also would be experienced as part of an earthquake. Landsliding, lateral spreading, surface rupture and liquefaction of soils can all be triggered by earthquakes. Alluvial and water saturated soils tend to spread and liquefy during earthquakes. These soils are often found around creeks and streams in South County. These phenomenon would do damage to structures and possibly cause loss of life. Riparian areas would be protected from development by Policies R-RC 31-41 which include a buffer around those areas; this would prevent development and avoid the potential hazard of ground failure.

County policies would be adequate to protect lives and property, reducing in the unincorporated areas the seismic impacts from a large magnitude earthquake. The County's emergency preparedness and response plan to save lives can mitigate effects of a major earthquake in the unincorporated area. See Public Services Chapter 5, for further discussion of the County Emergency Response Plan. *Substantial property damage and loss of life could occur in a major earthquake regardless of the policies and regulations adopted by the County.*

Therefore, this impact remains significant and unavoidable.

Mitigation Measure: No further mitigation required or possible.

Impact 4. Soil Erosion. Soil erosion could occur as a result of grazing, farming, mining, grading for construction, clearing of vegetation, improper drainage controls, recreational uses and geologic activity. In this process, the soil is carried by surface runoff into the drainage system and can degrade water quality (See Chapter 5L, Hydrology) and fisheries. Soil erosion also reduces storage capacity for reservoirs.

The moderately steep hillside areas along the west and eastern borders of the Valley are considered high erosion hazard areas. The Draft 1994 General Plan notes that steep hillsides are best used for limited grazing, low level recreation, watersheds and habitat preservation. This loss of soil through erosion can cause scenic destruction, permanent scarring of lands or hillsides, loss of habitat for plants and wildlife and damage to watersheds. The Draft 1994 General Plan has several policies in the Resource Conservation section dealing with watershed protection (Policy R-RC 8) and minimization of sedimentation and erosion through land development controls (Policy R-RC 13) and adequate planning for watershed and habitats. The Grading Ordinance also establishes minimum standards to prevent soil erosion and the production of sediment.

A watershed management study is being prepared by the Santa Clara Valley Water District, to determine the extent of harmful erosion and its impacts on the watershed. If study results indicate significant impacts additional policies or ordinances should be implemented to further mitigate the impact. *Implementation of the policies and regulations of the Draft 1994 General Plan would reduce soil erosion to a less than significant impact.*

Mitigation Measure: No further mitigation required.

Endnotes to Geology Chapter

1. U.S. Geological Survey, San Francisco Bay Region, Sheet 3 of 3, 1970.

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2. State of California Department of Natural Resources, Geologic Map of Santa Clara County, California, Showing Mines and Mineral Deposits, 1953.
3. "Cracks Help Shatter Quake Theories," San Jose Mercury News, 21 October 1991, sec. B, page 1.
4. The Working Group on California Earthquake Probabilities, Probabilities of Large Earthquakes in the San Francisco Bay Region, U.S. Geological Survey Circular 1053, 1990.
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14. Rural Unincorporated Health and Safety chapter, pages 15-16, February 14, 1994 draft.
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20. County of Santa Clara Advance Planning Office, Santa Clara County General Plan Update, countywide Health and Safety Chapter, pages 49-55, July 29, 1993 draft; and Rural Unincorporated Health and Safety Chapter, pages 22-27, February 14, 1994 draft.

CHAPTER 5L FLOOD HAZARDS

Environmental Setting

Flood hazards that pose a threat to public safety and property include stormwater flooding, tidal flooding, and inundation due to dam failure.

Stormwater Flooding

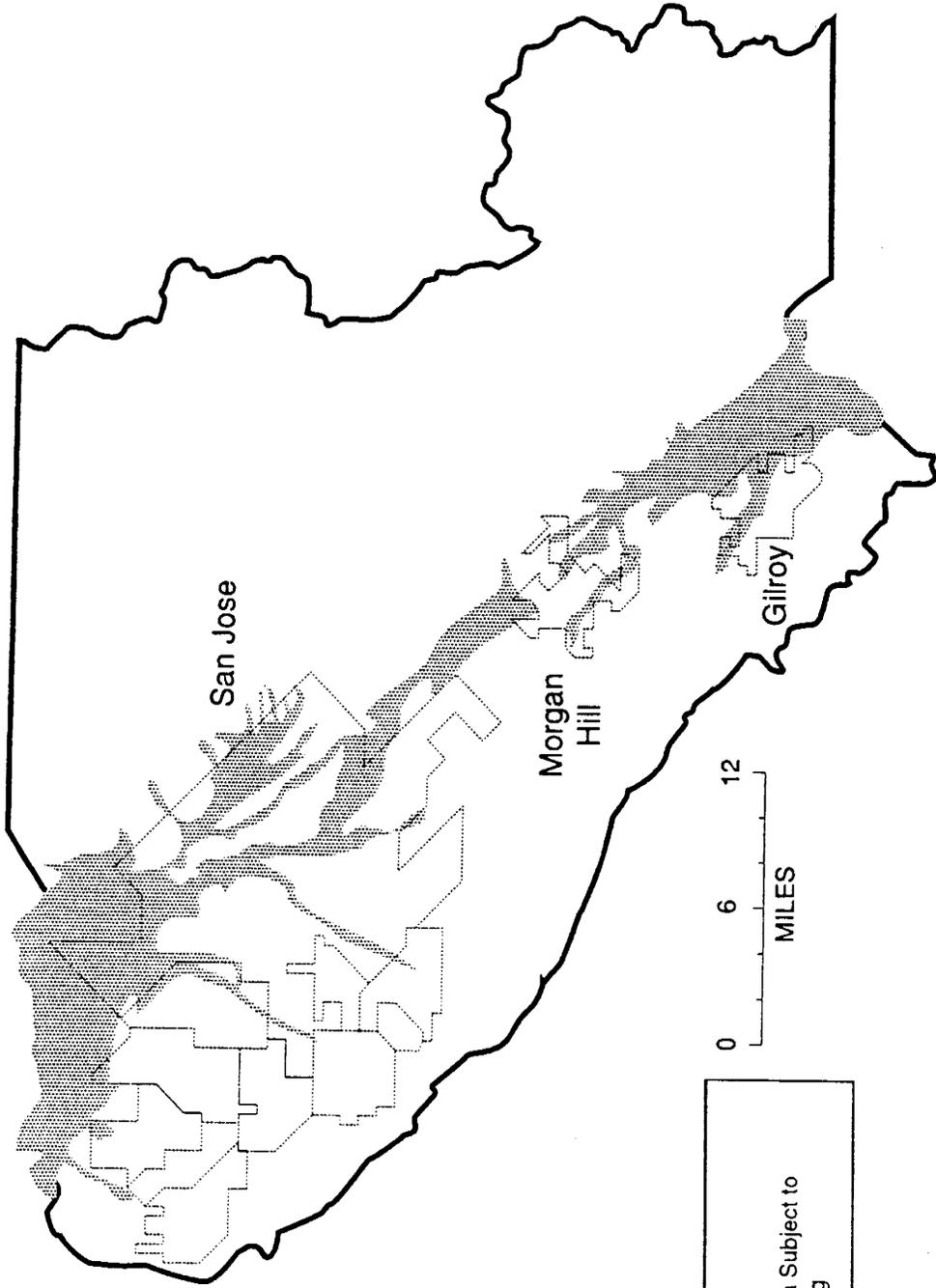
Stormwater flooding has been a continuing problem for much of the County since permanent settlement of the valley floor began. Much of the valley floor (approximately 60 out of 300 square miles or 20%) is flood-prone, and despite extensive flood control efforts, nearly 300 of the county's 700 miles of streams, creeks, and rivers are still incapable of carrying flows from a 1% flood, i.e., a flood that has a 1% chance of occurring each year, or will occur on an average of once every 100 years. Even relatively small-scale flooding (e.g., one foot of standing water) can cause damage to utilities, roads, building foundations, crops and other properties.¹

Figure 5L-1 shows areas in the County that have the potential for flooding. As indicated in the figure, most areas with flooding potential are located on the main valley floor and in the baylands, especially along the Guadalupe and Coyote Creeks. A large area east and south of Gilroy is also subject to flooding.

Urban development creates a new impervious surface area, which increases the total amount of stormwater runoff, thereby increasing the potential for flooding. Two areas that exemplify urban area flooding problems are the Guadalupe River area in downtown San Jose and the area along the San Francisquito Creek in Palo Alto. Both are heavily developed urban areas that have experienced flooding problems during heavy rains.

In the rural unincorporated areas, the most extensive flooding problems occur in the South County, where well over half of the valley floor, including much of San Martin, would be inundated by a 100-year, or 1%, flood. Generally poor local drainage has been a major issue for some time. The use of detention basins in the South County area has become more prevalent in recent years as a method of reducing peak runoff to provide flood control benefits.² The SCVWD continues to construct drainage and flood control facilities for South County as funding permits, but many areas still experience persistent drainage problems.³ Several areas in South Santa Clara County are likely to experience drainage and/or flood problems. The lands west of the Monterey Highway in San Martin have drainage problems and development requires

Figure 5L-1 Flood Hazard Areas



LEGEND
Generalized Area Subject to Potential Flooding

NORTH
NO SCALE

Sources: Santa Clara County Planning Office

See federal flood insurance rate maps for more specific data.

problems (handled by the SCVWD). Local drainage problems are defined as those in which the tributary drainage area is less than one square mile. These issues are typically handled by the detention basins. The flood control project for Llagas Creek ends at this point which leaves the area further downstream open to flooding. The land use designation in this area is mostly Rural Residential with some Medium Scale Agricultural lands. The area to the south and east of the City of Gilroy is subject to drainage problems and flooding from Uvas and Llagas Creeks. This area is designated as Agriculture Medium and Large-scale. The foothills east of San Jose can also experience flooding as well as drainage problems. These are mostly designated as Hillside lands. Fingers of flooding occur along most creeks in these East Foothills.

The County experienced major flooding during the storm of February 12-20, 1986, when the 1% flood occurred along Uvas Creek, causing significant damage to houses in the City of Gilroy. In the northwest, overbanking from Calabazas Creek caused some damage to houses and businesses in the City of San Jose. Minor flooding and erosion also occurred along many other creeks in the county, including Stevens, San Tomas, Ross, Guadalupe, Los Gatos, Upper Penitencia, Jones, and Llagas Creeks.⁴

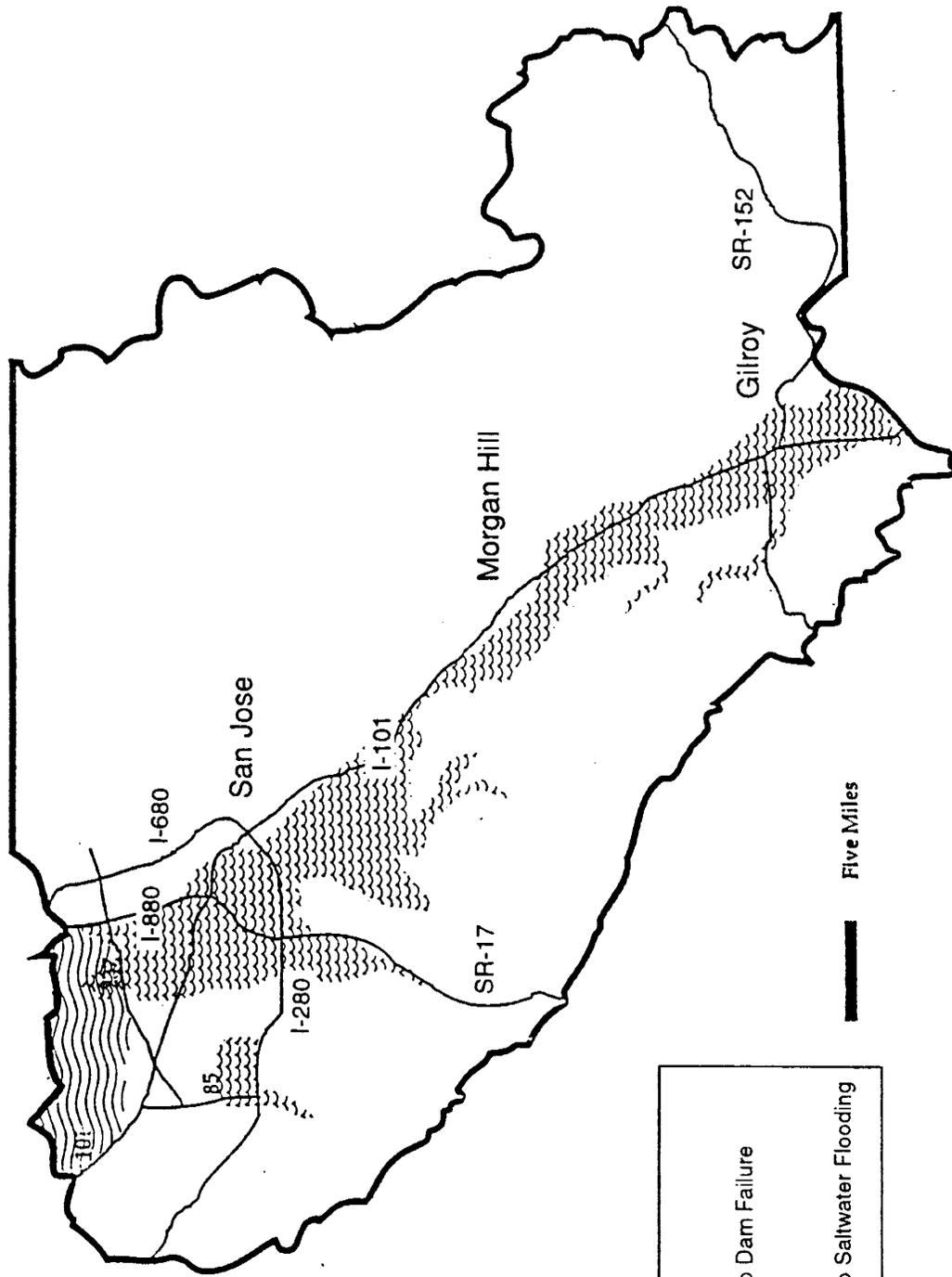
Tidal Flooding

Areas of North County are subject to saltwater flooding from San Francisco Bay. Tidal flooding may occur due to levee failure or overtopping as a result of exceptionally high tides and/or heavy rains. Tidal flooding may be more severe in areas that have subsided due to overdrafting of groundwater basins. The levees used to create salt evaporation ponds provide some protection from tidal flooding, and historically there has been little impact from tidal flooding as far inland as Alviso or the San Jose/Santa Clara Water Pollution Control Plant. Over the long term, if sea levels were to rise due to global warming, the potential for tidal flooding could become more significant.⁵

Inundation Due to Dam Failure

Inundation due to dam failure can cause major life and property losses in the area immediately downstream from the dam. Flooding of a similar nature may also occur due to overtopping of the dam during periods of heavy rain. As indicated in Figure 5L-2, much of the valley floor would be subject to flooding due to dam failure. Investigation into the seismic stability of the major dams maintained by the SCVWD has been completed. Some modifications, redesign and construction to prevent overtopping, as well as enlargement of spillways has been completed to ensure safety in a seismic event.⁶

Figure 5L-2 Dam and Levee Failure Inundation



LEGEND

- Areas Subject to Dam Failure Flooding
- Areas Subject to Saltwater Flooding

NORTH
NO SCALE

Sources: Santa Clara County Planning Office

Drainage and Flood Control Responsibilities⁷

In Santa Clara County, responsibility for addressing flooding is divided jurisdictionally between "local drainage" problems (handled by city and County governments) and "flood control" County and city governments through construction of curbs, gutters, inlets, and storm drains that collect runoff and direct it into the major creeks and channels on the valley floor. When there is too much rainfall runoff for the local systems, waters overflow into city streets and usually cause minor flooding that may impede automobile travel but usually does not cause much economic damage to properties, nor loss of life. The major creeks and channels that collect runoff from storm drains are under the jurisdiction of the SCVWD and make up the "flood control" system. The district is divided into five flood control zones for purposes of operating the flood control program.⁸ The four northernmost flood control zones drain into San Francisco Bay, and the south zone drains via the Pajaro River into Monterey Bay. Each of these zones has a separate flood control program and each is a separate fiscal entity with its own revenues and expenditures.

Typically, storm drains are funded from the general funds of the County and cities, while flood control projects on major tributaries are paid for from property tax and benefit assessment revenues collected by the SCVWD for this purpose.

Draft 1994 General Plan Strategies

The Countywide Health and Safety Chapter and Rural Unincorporated Health and Safety Chapter contain the same strategies pertaining to natural hazards including flooding:⁹

- Strategy 1: Inventory hazards and monitor changing conditions.*
- Strategy 2: Maintain low resident population densities within high hazard areas.*
- Strategy 3: Design, locate and regulate development to avoid or withstand hazards.*
- Strategy 4: Reduce the magnitude of the hazard, if possible.*
- Strategy 5: Provide public information regarding natural hazards.*

Policies and Regulations

A. Plan Policies that Foster Environmental Protection

This section of the EIR discusses existing policies, ordinances and regulations relating to flood hazards that serve to protect the rural unincorporated environment. It begins with policies of

the 1980 General Plan that are carried forward to the Draft 1994 General Plan that relate to flood hazards. There are no substantive policy revisions in the Draft 1994 General Plan relating to flood hazards. General Plan policies are followed by a discussion of other ordinances and regulations implemented by the County or other levels of government to provide environmental protection and to maintain and improve environmental quality in the rural unincorporated area.

Policies from the 1980 General Plan

The County will maintain up-to-date mapping of flood hazard areas [Policy R-HS 6] and any areas of significant hazard will receive land use designations that minimize public exposure and population levels [Policy R-HS 7]. In rural areas with known hazards such as a floodway, development must be designed to avoid or reduce risks and to avoid any increased risks to neighboring properties [Policies R-HS 9-10].

Land uses allowed in designated (100 year) flood plains would be required to minimize risk associated with flooding and any areas of persistent flooding due to dam failure are designated for Agriculture or other open space uses [Policies R-HS 22, 29]. Flood control measures are to be incorporated as part of an overall improvement to enhance resource conservation, particularly riparian preservation and restoration, recreation opportunities, and scenic resources [Policies R-HS 31,32]. The Draft 1994 General Plan encourages natural flood control even though it may require more land than conventional channels or concrete dikes. Flood control consistent with natural environmental conditions is recommended. This may include planting of native vegetation and keeping the natural state of creeks. Whenever possible restoration of some altered creeks is also recommended.

South County Joint Area Plan

The South County Joint Area Plan has proposed a set of policies to mitigate the effects of flooding and lack of drainage. Current flood control projects are designed to protect existing developed and planned urban areas. Policy SC 12.0 specifies that flood damage in South County should be minimized through a combination of actions. Land development should be managed within the three jurisdictions (County of Santa Clara, City of Morgan Hill, City of Gilroy) to mitigate flooding problems and minimize the need for local public funding for additional flood control. Local drainage facilities should be provided. Limits should be placed on development in flood prone areas and inappropriate development prevented through land use planning and regulations. Areas which are developed or planned for development should be protected by the construction of flood control facilities. Development should also be managed to minimize off-site drainage and flooding through appropriate planning and design standards. Policy SC 12.1 establishes the priority for construction of flood protection facilities. First priority is given to areas of existing development subject to highest flooding potential, second to undeveloped areas

planned for urban development, then to agricultural lands; and finally to other undeveloped areas.

If federal or state funds are not available for flood control, property owners who would benefit should pay the cost [Policy SC 12.2]. Projects which might induce downstream flooding should provide mitigation. If development is allowed in flood-prone areas, flood control should be provided at the developers expense [Policies SC 12.3, 5]. All development should provide mitigations for off-site impacts [Policy SC 12.8].

Any development in streamside areas should allow for protection and maintenance of the environment and riparian areas. The cumulative effects of development which may affect creeks in South County should be examined to prevent destruction of natural habitat and avoid the need for channelization [Policies SC 12.4, 9].

B. Ordinances and Regulations that Reduce Impacts

County Drainage Manual

This manual contains guidelines for design and installation of drainage facilities for projects. Projects must demonstrate that drainage will be handled adequately in order to avoid drainage and flooding problems. These guidelines ensure that there are no on or off-site drainage problems associated with a project, and that drainage conditions are not changed or altered in any way by the project.

Grading Ordinance

The ordinance requires that all drainage structures and devices be consistent with the adopted County Drainage Manual and its standards. It outlines disposal requirements for both on and off-site drainage; provides for slope protection and erosion control; and the design of dikes, swales and ditches.

Land Development Regulations

The County Land Development Engineer reviews all projects to ensure no on or off-site drainage impacts would occur as a result of the project.

Zoning Ordinance

For projects requiring a use permit, Section 47-5(d) ensures that adequate storm drainage (that is creating no on or off-site impacts), exists or shall be provided as a part of the project.

Special Flood Hazard Area Ordinance, Chapter VII (Sec. C12-800 through C12-846) of the Santa Clara County Code

This ordinance applies to all areas of special flood hazard (i.e., within the 100 year flood zone as established by FEMA) within the unincorporated area of Santa Clara County. No new development shall occur or structure or improvement shall be constructed without compliance with this Ordinance. This Ordinance provides for:

1. Restricting or prohibiting uses which are dangerous to health, safety and property due to water or flood related erosion hazards, or which result in increases in flood related erosion or in dangerous flood heights or velocities;
2. Requiring that uses which are vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
3. Controlling the alteration of natural floodplains, stream channels and natural protective barriers, which help to accommodate or channel floodwaters;
4. Controlling filling, grading, dredging and other developments which may increase flood damage; and
5. Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or which may increase food hazards in other areas (Ordinance No. NS-1100.63).

C. Significance Criteria

According to *Supplementary Document G (q)* of the CEQA Guidelines, projects would have significant adverse impacts if they were to *cause substantial flooding, blockage of flood waters, erosion or siltation.*

Impacts and Mitigations

Impact 1. Stormwater Flooding: Major flooding has inundated large areas in south Santa Clara County 13 times in the last 63 years. In the event of a major flood, it is predicted that about 14,000 acres of the South County would be inundated.¹⁰ Small scale flooding (one foot of standing water) can cause damage to utilities, roads, crops and other properties. The major rivers and creeks subject to flooding in South County are the Pajaro River and the Llagas and Uvas Creeks and their tributaries. Llagas Creek lies to the east of the City of Gilroy and

CHAPTER 5L: Flood Hazards

traverses mostly agricultural lands before it flows into the Pajaro River, flowing through lands designated AL (large scale agriculture). Llagas Creek has the capacity to over bank in the Gilroy area, where it impacts mostly agricultural lands, though some residences could be flooded. Flooding also occurs at the confluence of Llagas Creek and the Pajaro River. Uvas Creek flows through agricultural land north of Gilroy and then passes through Gilroy's USA. Uvas Creek has caused heavy damage to residential locations in the area of 10th Street in Gilroy. Minor erosion and flooding could occur along any of the streams and creeks in the South County.

Much of the Rural Residential development allowed under the Plan would be on the Valley floor and subject to flooding. It is currently the Santa Clara Valley Water District's (SCVWD) policy to assign highest priority to the construction of flood control projects which will protect areas subject to the greatest potential flood damage.¹¹ Generally, such areas include those that have existing or planned urban development. Currently there is one major flood control project being undertaken in the County, the Llagas Creek Watershed Protection project. No further studies are planned.¹² The Draft 1994 General Plan policies to prevent inappropriate development in flood prone areas and to designate areas of persistent flooding to agricultural or open space (Policies R-HS 29 and 22) would help to minimize flooding and drainage problems for new development.

Hazards to agricultural lands would be topsoil erosion and deposition of debris, although agricultural uses are still considered the best use of land in flood-prone areas. The construction of foundations above potential flood levels would also reduce flood hazards for new development. However, this solution is not comprehensive because it simply diverts the flows to another location which could result in flooding of existing buildings.

The use of detention basins is not considered an adequate solution to the flooding that occurs in the South County area. These basins often have no outlet and can be unlined which allows for pollutants to be released into surface water or groundwater. Those basins with an outlet and timed release are still not considered adequate since there is no area-wide system for conveyance.

Flooding affects large areas of South County in which current flood control projects will not protect existing and planned development. There are not current plans for an area-wide flood and drainage control strategy. *Implementation of the flood control policies in the Draft 1994 General Plan and in The South County Joint Area Plan and managed development through proper siting and design standards can minimize the effects of flooding, but flooding will still occur in*

South County because there isn't a comprehensive area-wide strategy to prevent it. Thus, flooding remains a significant impact.

Mitigation Measure 1: Prepare and implement an up-to-date Master Plan for South County to identify and prioritize necessary flood control and drainage improvements to reduce the impacts. *This would reduce the impacts from flooding to a less than significant impact.* [Responsibility: Santa Clara Valley Water District]

Impact 2. Tidal Flooding. Areas of the North County may be subject to saltwater flooding from San Francisco Bay. Heavy rains and exceptionally high tides could result in levee failure or overtopping of levees. The areas that could be impacted would be the Alviso, Mountain View shoreline, several solid waste disposal sites, and the San Jose/Santa Clara Water Pollution Control Plant. Historically, there has been little impact from tidal flooding in the unincorporated area since most of that area is in public lands or open space. *Impacts from tidal flooding would not be a significant impact.*

Mitigation Measure: No further mitigation is required.

Impact 3. Dam Failure. Within Santa Clara County, there are ten reservoirs with dams owned by the SCVWD which are subject to dam failure. Failure could result from overtopping due to heavy rains or from a major seismic event. Dam failure could result in loss of life and property in the area downstream from the dam. Of the ten major dams owned by the SCVWD, Anderson and Coyote are on the eastern side of the County. Land use designations surrounding these dams are Regional Parks, Public Lands and Hillside; only Hillside are available for development, but at a very low density. The Chesbro, Guadalupe, Vasona, Uvas, Stevens Creek, Calero, Lexington, and Almaden dams are along the western portion of the County. Land uses surrounding these dams are mainly Hillside and Regional Park Lands.

Dam failure would be expected to inundate much of the valley floor. The SCVWD has reviewed the seismic stability of these dams and none of them are currently in need of modification to withstand a major seismic event. Historically, dam failure has not occurred in the County and the areas directly surrounding the dams are areas with little development which would minimize the impacts of flooding on human life and property. For example, Hillside areas have a density of 20-160 acre minimum parcel size. As clustering would be

permitted in Hillside areas, any new subdivision units could be clustered to avoid the unlikely event of dam failure. There are many other privately owned dams within Santa Clara County, some owned by public entities, these dams also would not be expected to fail in a seismic event. *While minor damage as a result of a seismic event is possible, catastrophic dam failure would not be expected to occur in any of the dams.*

Mitigation Measure: No further mitigation is required.

Impact 4. Drainage. Impacts from drainage could occur as a result of too much rainfall for the local drainage systems to convey. It may cause overflow of drainage channels onto roads and property, but does not usually cause loss of life nor the type of economic damage to property caused by flooding.

Local drainage is designed to provide a lower level of protection than that provided by major flood control facilities. That is, in the unincorporated area, local drainage facilities are designed for runoff from a 3-10 year storm, while flood control facilities are designed for a 100 year flood event.¹³ Typically drainage is controlled with the use of curbs, gutters, inlets and storm drains that collect runoff and direct it into the major creeks and channels on the valley floor. In the more rural areas, drainage may be accomplished with the use of ditches and collection ponds, outfalls or culverts.

Future development in South County would put increased demands on existing drainage facilities because it would increase runoff. Drainage problems occur in the South County since the lands are typically flat and there is no area-wide storm drainage system. In addition, some South County soils have low permeability and hold water with no outlet, while other areas conveyance is adequate and can lead to sheet flow, both of which would exacerbate drainage problems.

Many areas of South County, including the west side of San Martin, land south and east of the City of Gilroy, and areas of the East Foothills that could be developed under the Draft 1994 General Plan, have local drainage problems. In most cases these problems occur as a result of lack of flood control facilities, storm drains or outfalls.

Any development approved in South County requires installation of drainage facilities. This process now occurs on a parcel by parcel basis which is, by necessity piecemeal. Developers are required to mitigate drainage impacts that occur off-site and do this mainly with detention basins. However, this system does not provide a comprehensive solution to the drainage problems that occur

in South County. The use of detention basins on an individual project basis is not considered an adequate solution by the SCVWD. They are used to detain storm water until the peak in the channel passes, however, unless their release is properly timed, their release can still overload the channel. Detention basins are difficult to operate and maintain properly and no storm drainage system exists to convey the water from the basin to the channel.¹⁴ Within South County a comprehensive areawide drainage facility has not been considered economically feasible because the low density of development would not generate sufficient revenues to pay for local drainage facilities. County Policies R-HS 22, 29 limit development in areas of the South County where local drainage problems occur. Policies R-HS 9, 10 and South County Joint Area Plan policies 12.0, 2, 3, 5 require developers to use proper design standards, mitigate off-site and on-site drainage impacts, and install facilities which would contribute to an area-wide solution. *Even with implementation of these policies, the lack of adequate comprehensive local drainage facilities would cause significant impacts on new and existing development.*

Mitigation Measure 1: The SCVWD should prepare an up-to-date current Master Storm Drainage Plan which identifies the necessary improvements for area wide management. *Implementation of a Master Storm Drainage Plan would mitigate the impacts of inadequate drainage to a less than significant impact.* [Responsibility: Santa Clara Valley Water District].

Endnotes to Flood Hazards Chapter

1. County of Santa Clara Department of Planning and Development, Draft 1994 General Plan, Countywide Health and Safety Chapter, page I-34.
2. Letter from Marc J. Klemencic, P.E., Supervising Engineer, Design Coordination Division, Santa Clara Valley Water District, to Hugh Graham, Santa Clara County Planning Office, February 28, 1994.
3. County of Santa Clara Department of Planning and Development, Draft 1994 General Plan, Rural Unincorporated Health and Safety Chapter, page P-15.
4. Santa Clara Valley Water District, Report on Flooding and Flood Related Damages, Santa Clara County, February 12th through 20th, 1986, June 1988, pages 1-9.

CHAPTER 5L: *Flood Hazards*

5. County of Santa Clara Department of Planning and Development, Draft 1994 General Plan, Rural Unincorporated Health and Safety Chapter, page P-16.
6. County of Santa Clara Department of Planning and Development, Draft 1994 General Plan, Countywide Health and Safety Chapter, page I-34; and Rural Unincorporated Health and Safety Chapter, page P-16.
7. Adapted from Santa Clara Valley Water District, Flood Control in the Santa Clara Valley, An Overview, pages 9 and 15.
8. The five flood control zones exclude a 300-square-mile area in the northeast portion of the county, where there are no known flooding problems.
9. County of Santa Clara Department of Planning and Development, Draft 1994 General Plan, Countywide Health and Safety Chapter, page I-32; and Rural Unincorporated Health and Safety Chapter, page P-16.
10. County of Santa Clara, Office of Planning, South County Joint Planning Program, page 3-21.
11. County of Santa Clara, Office of Planning, South County Joint Planning Program, September, 1986, page 3-21.
12. Sue Tibbits, Associate Civil Engineer, Santa Clara Valley Water District, telephone conversation, August 1994.
13. County of Santa Clara, Office of Planning, South County Joint Planning Program, September 1986, Page 3-23.
14. Sue Tibbits, Associate Civil Engineer, Santa Clara Valley Water District, telephone conversation, August 1994.



CHAPTER 5M WATER SUPPLY AND WASTEWATER

Environmental Setting

Water Sources

The Santa Clara Valley is a semi-arid region with seasonal rainfall, which needs to be supplemented to provide an adequate, year-round supply of water. Santa Clara County's water supply consists of 1) water imported from other areas of the state, 2) water pumped from natural underground aquifers that lay beneath the County, and 3) water derived from surface runoff. Historically, the area depended on local groundwater for most of its water supply. Excess pumping in the early part of the century caused land subsidence, and use of local water was reduced.

Imported Water. Since the County's water demand has already exceeded the resources within its boundaries, imported water must be increasingly depended upon to meet growing demand. The amount of water demand is correlated directly with the amount of growth. Imported water comes from three sources:¹

1. The South Bay Aqueduct of the State Water Project, which brings water from the California aqueduct near Tracy through the Livermore Valley to a terminus in east San Jose just north of Penitencia Creek.
2. The federal government's San Felipe Project, a system that brings water stored in San Luis Reservoir to Santa Clara County as part of the Central Valley Project.
3. San Francisco's Hetch Hetchy system, a gravity-flow pipeline system that brings water stored in the Sierra Nevada Mountains to Santa Clara, Alameda, San Francisco, and San Mateo Counties.

Groundwater and Other Local Sources. Local water sources can contribute approximately 217,000 acre-feet per year, or about half of annual demand during the late 1980s. Water users obtain supplies from the following local sources:

1. Users' wells, pumping from groundwater basins recharged naturally or artificially by the Santa Clara Valley Water District (SCVWD) from water stored in surface reservoirs.

CHAPTER 5M: *Water Supply and Wastewater*

2. Water stored in SCVWD surface reservoirs and diverted to any of the three SCVWD water treatment plants.
3. Private reservoirs.

The Santa Clara Valley is underlain by unconsolidated bay and alluvial deposits that contain substantial amounts of groundwater. These sediments include clays, silts, sands, and gravels with a maximum thickness of 1,500 feet. The boundary between the Santa Clara and Coyote subbasins is at the narrowest portion of the valley at Coyote. The boundary between the Coyote and Llagas subbasins is at the same location as the drainage divide at Morgan Hill.²

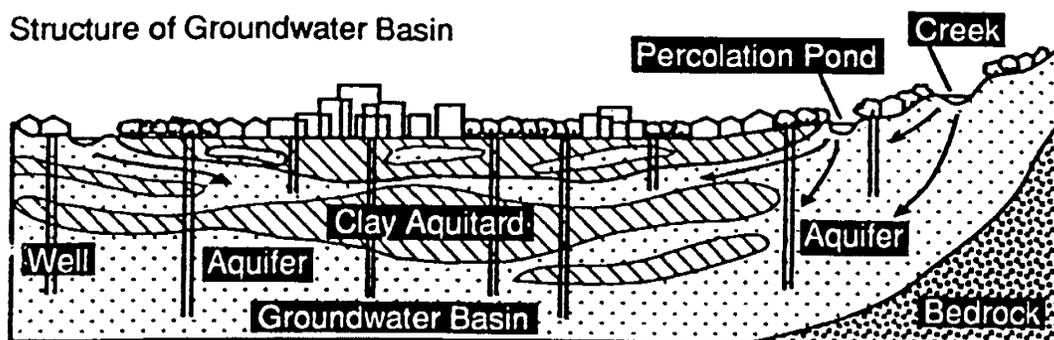
The Santa Clara subbasin is recharged principally through elevated gravels and sand along the edge of the basin. A shallow aquifer occurs at about 10 to 150 feet of depth in the basin interior. An artesian aquifer is also present at a depth of greater than 150 feet. The subbasin contains an estimated 3,225,000 acre-feet of water between depths of 10 and 310 feet.³ Water flows from recharge areas on the eastern and western fringes of the basin toward the basin center and then toward the bay.⁴ Hundreds of wells for municipal, industrial, residential, and agricultural use have been drilled in this subbasin.

The Coyote basin contains water under unconfined conditions at depths of less than 500 feet. The principal recharge occurs through percolation through the streambed of Coyote Creek. The storage capacity of the basin is estimated at 76,000 acre-feet. Water flow direction is toward the northwest. At the northern boundary of this subbasin, the Coyote Narrows, groundwater is forced to the surface by a rise in basin floor level and enters the channel of Coyote Creek. The subbasin has also been used to supply many different types of wells.⁵

The Llagas subbasin contains water under both confined and unconfined conditions. Between Gilroy and Morgan Hill, some zones of confinement exist. South of Gilroy, the aquifer contains confined groundwater at depth. This subbasin has an estimated storage capacity of about 475,000 acre-feet. Recharge occurs along the upper portions of Llagas and Uvas Creeks. Groundwater flows toward the south. Many wells have been drilled in this subbasin and have caused substantial drawdowns of water level, because the basin has limited recharge capacity.⁶

Artificial recharge facilities, known as percolation ponds, are used to supplement natural recharge of groundwater supplies. The slopes facing the valley floor and sandy or gravelly soils along creeks are critical because the drainage and percolation from these areas directly replenishes the main groundwater basins under the valley floor. Figure 5M-1 illustrates this process.

Figure 5M-1 Structure of Groundwater Basin



NO SCALE

Sources: Santa Clara County Advance Planning Office

Reclaimed Water. Reclamation of water, particularly the large volumes of treated wastewater currently discharged into the Bay by the County's three sewage treatment plants (see discussion under "Wastewater" below), would appear to be an obvious and simple means of increasing local water supplies while reducing the impact on the Bay. A recent study suggests that percolating or pumping reclaimed water into the valley's underground water supply is the most viable use of reclaimed water.⁷ Local water officials have expressed doubts, however, about potential unknown long-term health effects of such proposals and their impact on the integrity of groundwater quality. Projects that use reclaimed water for landscaping and agricultural purposes may be more feasible, although these, too, face certain obstacles. Establishment of two delivery systems, one for drinking water and another for reclaimed water, has been proposed as a way to facilitate the use of reclaimed water. A project to use reclaimed water for landscape irrigation is currently being considered by the City of Palo Alto.

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The SCVWD estimates that, with the construction of an extensive distribution system, up to 46,500 acre-feet of reclaimed water per year could be used for non-potable purposes by the year 2020. Non-potable uses include landscape irrigation and industrial process water. The treatment processes required for non-potable reclaimed water consist of primary, secondary, and tertiary treatment (filtration) with a final disinfection process before the water can be delivered via pressure pipe.⁸

The SCVWD has identified a potential use of 25,000 acre-feet per year of potable reclaimed water that could be blended with surface water and percolated into the groundwater basin. To meet the reclaimed water quality standard for groundwater recharge, tertiary treatment, and additional processes, reverse osmosis and final disinfection are required. These processes currently make the overall cost for groundwater percolation of reclaimed water less attractive.⁹

Water Demand

Recent Trends. The SCVWD reports that in calendar year 1987, the first year of the most recent drought, the County's water needs amounted to 393,000 acre-feet. In calendar year 1993, immediately following the drought, the County's water needs dropped to approximately 325,500 acre-feet, with agricultural water use accounting for 31,900 acre-feet and non-agricultural water use accounting for 293,600 acre-feet. Of this 293,600 acre-feet, municipal water systems supplied 271,900 acre-feet, and independent groundwater wells supplied 21,700 acre-feet. Data on the latter source are not readily available due to limitations on the breakdown of water use; however, it was determined that 6,600 acre-feet were pumped from the San Martin area of the County.)¹⁰

The SCVWD has estimated water use for single- and multi-family households on a countywide basis. For single-family residences, water use is approximately 325 gallons per day. For multi-family units, the average is approximately 215 gallons per day.¹¹

Demand Projections. The SCVWD estimates that, under average weather conditions, the water demands of the County will be 458,000 acre-feet, 488,000 acre-feet, and 515,000 acre-feet for the years 2000, 2010, and 2020, respectively. Water needs would be slightly higher during dry periods. The SCVWD's on-going demand management programs will reduce estimated demands by 45,000 acre-feet per year by the year 2020, resulting in a net need of 470,000 acre-feet per year.¹²

The SCVWD's water demand projections are based on estimates of countywide housing, jobs, home values, population, water prices, and historical water use. Estimates for jobs and housing are based on 1990 demographic information contained in Projections 90, a publication of the

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Association of Bay Area Governments (ABAG), as well as information from the census, water retailers, local cities and planning agencies. The demographic information was reviewed by all the County's municipalities prior to estimating water demands.¹³

Projected Water Supply

The SCVWD's water supply estimates are based on two hydrologic conditions: the long-term average and the critical dry period. The long-term average hydrologic condition is the average water supply that can be expected for the County based on historical hydrology over the long term. The critical dry period hydrologic condition is that period of hydrology that has been defined to represent a 10-year drought of 1-in-100-year severity. This critical dry period of hydrology is similar to the definition used by the State Department of Water Resources in planning the State Water Project.¹⁴

As discussed above, the SCVWD uses local and imported water sources to meet the County's water needs. On a long-term average basis, local surface water supplies provide 91,000 acre-feet per year. During a critical dry period, local surface water supplies would provide approximately 50,000 acre-feet per year on average, and groundwater would provide approximately 40,000 acre-feet per year on average.¹⁵

Table 5M-1 shows the SCVWD's current estimates of imported water supply for the demand level of 1995 and 2020 for the two hydrologic conditions: the long-term average basis and the critical dry period. The estimates incorporate the latest operating requirements of the State Water Project and Central Valley Project. It should be noted that, due to Endangered Species Act requirements in the Sacramento-San Joaquin River Delta, the SCVWD's state and federal imported supplies as well as the County's deliveries from the San Francisco Water Department (Hetch-Hetchy) may be further reduced from current estimates.¹⁶

It should also be noted that deliveries of Central Valley Project (CVP) water, via the San Felipe Project, may also be variable. The CVP deliveries to the County are subject to the availability of water in the federal supply system, the U.S. Bureau of Reclamation's obligations to its contractors, and the operating constraints imposed by the changing regulatory environment. These factors all contribute to the variability of the CVP deliveries on an annual basis. Therefore, even though the SCVWD's entitlement from the San Felipe Project is 152,000 acre-feet per year, which could ultimately represent up to 30% of the County's water supply, it is highly unlikely that the SCVWD will receive sustained deliveries of this magnitude. Current

TABLE 5M-1
Estimated Santa Clara Valley Water District Imported Supplies
(In Acre-Feet)*

Hydrologic Condition	SWP and CVP Entitlement*	SWP Supply	CVP Supply	Hetch Hetchy Supply	TOTAL (acre-feet)
Long-Term Average					
1995	252,000	81,000	102,000	66,500	249,500
2020	252,000	72,000	102,000	66,500	240,500
Critical Dry Period					
1995	252,000	54,000	73,000	60,800	187,800
2020	252,000	47,000	73,000	60,800	187,000

Table Notes:

- * acre-foot = 325,000 cubic feet, enough water to fill an area of one acre to a depth of one foot.
- SWP: State Water Project
- CVP: Central Valley Project
- *Entitlement: The amount of water the SCVWD is under contract to receive from the SWP and CVP.

Source: Santa Clara Valley Water District (SCVWD)

estimates are that, on a long-term average basis, the SCVWD can expect to receive only about 102,000 acre-feet per year, representing 20% of the County's water supply needs in the year 2020.¹⁷

The ability of the County's local and imported water supply to meet the estimated demand levels is dependent upon annual local and statewide precipitation, hydrology, and carryover reservoir groundwater storage.

Water Supply Study

The SCVWD is actively engaged in identifying water supply management alternatives to increase the reliability of the County's water supply.¹⁸ The SCVWD's Water Supply Overview Study is scheduled to be completed in 1994. The objective of the Overview Study is to identify the water supply components that could be utilized to meet the County's future water supply needs through a 10-year drought with a 1-in-100-year severity. The report is based on updated information on demand-side and supply-side management of the County's water resources. The study will address the issue of variability in water deliveries from the San Felipe Project. The preferred water supply alternative will be determined through an Environmental Impact Report on the Water Supply Overview Study.¹⁹

Fresh Water Treatment

The SCVWD treats imported water at the following treatment plants:

- Penitencia Treatment Plant, located in the San Jose East Foothills just north of Penitencia Creek at the end of Whitman Way. This treatment plant can deliver peak flows of 40 million gallons of potable water a day (mgd). The plant treats water received from the South Bay Aqueduct.
- Rinconada Treatment Plant, located in the west foothills in Los Gatos on More Avenue. This treatment plant has a peak capacity of 80 mgd, and treats water received from the South Bay Aqueduct via the Central Pipeline and the Rinconada Force Main, and from the San Felipe Project via the Almaden Valley pipeline from Calero Reservoir.
- Santa Teresa Treatment Plant, located in the Almaden Valley area of south San Jose on Graystone Lane. This plant was completed in 1988 and has a capacity of 100 mgd. The plant treats water received from the San Felipe Project via the Almaden Valley pipeline.

Treatment costs have risen significantly because of more stringent requirements by the California Department of Health and the U.S. Environmental Protection Agency. The California Department of Health Services sets "action levels," or recommended purity levels, for pollutants in drinking water, some of which are stricter than the national "maximum contaminant levels" (MCLs).²⁰

Water Quality

Surface Water Quality. Surface water of Santa Clara County is generally soft. Water from drainage basins in the Santa Cruz Mountains generally has less total dissolved solids (TADS) than water from the Diablo Range. TADS values generally range from 150 to 250 milligrams per liter (mg/l).²¹

Groundwater Quality. Groundwater of the three interconnected Santa Clara, Coyote, and Llagas subbasins is of calcium-magnesium bicarbonate type and is commonly hard. Near San Francisco Bay, elevated sodium levels have been recorded, possibly as a result of saltwater intrusion. TADS levels are generally high throughout the three basins, but are particularly elevated near the base of the Diablo Range. The Diablo Range and Santa Cruz Mountains are composed primarily of sedimentary and intrusive rocks that do not bear water in substantial quantities. Some groundwater occurs in fractures and joints and is generally of good quality. At deep levels, groundwater may be saline.²² A 1988 County Health Department study of groundwater contamination in private wells found that many older private wells present a potential health hazard to users due to their construction, their draw from the less protected shallow aquifer, and the lack of monitoring for contaminants.²³

Pollution that originates from a specific discrete location (i.e., a "point" source) includes:

- Effluent from municipal wastewater treatment plants.
- Chemicals used in industrial and commercial activities and processes.
- Regulated industrial wastewater discharges.
- Hazardous wastes and materials from spills, mishandling, and industrial accidents.
- Effluent from inadequately functioning septic systems.
- Illegal dumping activities.

Urban stormwater runoff also contains pollutants that have diffuse origins, and are therefore referred to as "non-point" source pollution. "Non-point" source pollutants include metals, organic wastes, pesticides, and a variety of other pollutants.²⁴ Runoff containing these pollutants is captured by streams that in turn feed the Anderson, Calero, Almaden, Guadalupe, Lexington, Uvas, Chesbro, Coyote, Vasona, and Stevens Creek reservoirs. These sediments and pollutants build up and increasingly degrade water quality and biological health of creeks, streams, and San Francisco Bay.

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In rural unincorporated areas, potential water pollution sources include:

- Wastewater disposal from septic systems.
- Erosion and sedimentation.
- Agricultural runoff, including runoff from livestock operations.
- Commercial and industrial activities that use potentially contaminating materials (e.g. transportation and leakage of storage tanks).
- Cumulative impacts from development and other general non-point sources of pollution.

Nitrate Study

The SCVWD is currently conducting a study to determine the extent and potential sources of nitrates in the Llagas Basin. Over the years, groundwater from municipal and private water supply wells in this area has been found to contain nitrate levels greater than the levels allowed by federal safe drinking water standards.²⁵ The study is expected to be completed by March 1995, at which time the SCVWD will present a Nitrate Management Plan.²⁶ Figure 5M-2 shows locations that may contain nitrate contamination. Countywide, there are many major sources of water pollution.

Conclusion

Environmental factors such as quality of wastewaters, soil composition, vegetative types, proximity of pollution sources to surface waters, percolation rates of soils and depth to groundwater, precipitation rates, and steepness of slopes contribute to the degree of pollution of surface water and groundwater in rural areas.²⁷

Regulation

The U.S. Environmental Protection Agency, through the Clean Water Act, Safe Drinking Water Act, and Superfund, monitors and enforces standards relating to groundwater protection and clean-up. The California Water Resources Control Board and Department of Health Services oversee regional water control boards, monitor public water supplies, and administer Title 22, California's safe drinking water act. Regionally, the Regional Water Quality Control Board (RWQCB), the Santa Clara Valley Water District, and the Santa Clara County Health Department oversee groundwater monitoring.

The Regional Water Quality Control Board (RWQCB) is mandated by the state to protect the water quality of all water resources in the San Francisco Bay Area. Although numerous local

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agencies and water companies are involved in the delivery of water to individual users, the Santa Clara Valley Water District (SCVWD) is the agency primarily responsible for assuring that Santa Clara County has an adequate supply of water to meet current and future potable water needs.²⁸

Water quality degradation is regulated by the National Pollution Discharge Elimination System (NPDES) program, established by the Clean Water Act. The NPDES program controls and reduces pollutants to water bodies from point and non-point discharges. The program is administered by the California RWQCBs. The San Francisco RWQCB issues NPDES permits for discharges to water bodies in the San Francisco Bay Area.²⁹

Wastewater

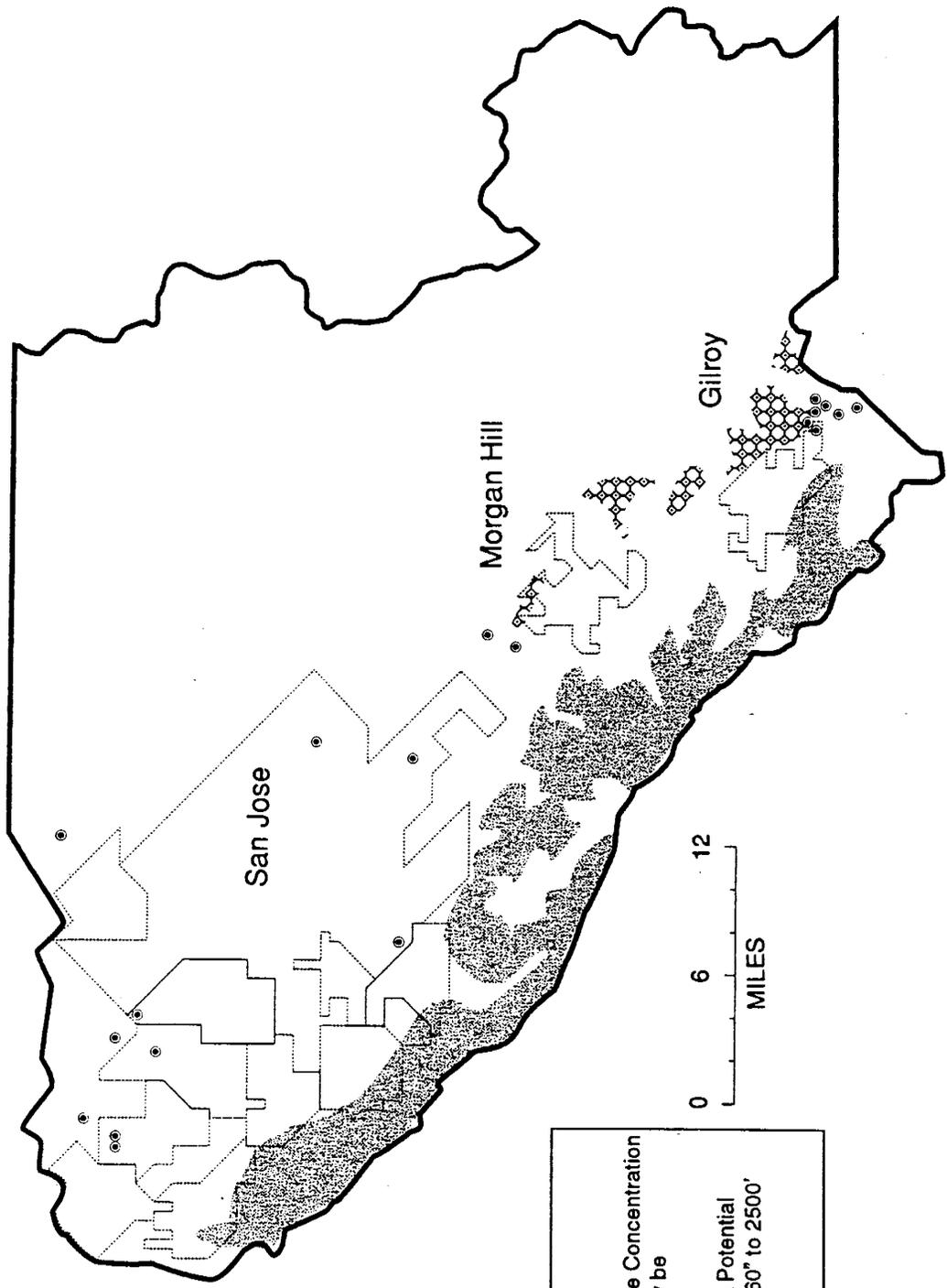
Collection, Treatment, and Discharge: Santa Clara County is served by eight municipal and eight special sanitary district sewage collection systems. Sewage collected from incorporated areas in the northern part of the County is treated at the San Jose/Santa Clara Water Pollution Control, Palo Alto and Sunnyvale plants. These plants discharge their effluent directly or indirectly into San Francisco Bay. The plants treat industrial wastewater in conjunction with residential and commercial flows.

Some unincorporated urban pockets have sanitary sewers, while others do not. Generally, sewers are maintained by special sanitation districts. In order for a city to annex certain unincorporated pockets within a sanitary sewer district, the city is required to purchase some of the district's treatment capacity. When the entire sanitation district is annexed by a city, the district then dissolves.

The Gilroy/Morgan Hill sewage treatment plant handles solids from septic tanks in South County rural unincorporated areas, unlike other treatment plants in the County, which only serve incorporated areas. The Gilroy/Morgan Hill plant currently provides advanced primary treatment and has a capacity of 6.1 million gallons per day (mgd). Its service area includes the Urban Service Areas of Gilroy and Morgan Hill, and the plant serves septic systems in the South County area only. The plant does not provide sewer service to unincorporated areas. Expansion of the plant is currently underway, with completion expected in September 1994. Once completed, the plant will have a secondary treatment capacity of 7.5 mgd, including a 3.0-mgd tertiary treatment system designed to produce reclaimed water. With this expanded capacity, no problems are foreseen in serving septic systems in the South County.³⁰

Bay Water Quality: The pollution caused by conventional pollutants discharged into San Francisco Bay by sewage treatment plants has declined in the last several decades.³¹ Organic pollutants and suspended solids have declined significantly. These pollutants damage marine life

Figure 5M-2 Water Resources



LEGEND

- 
 Location where nitrate Concentration in Ground Water may be Injurious to Infants
- 
 Marine Fog Areas - A Potential Water Resources - 960' to 2500' Elevations


NORTH
NO SCALE

Sources: Santa Clara County Planning Office

Planning Analysis & Development

Santa Clara County Draft 1994 General Plan EIR

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by depriving it of essential oxygen. The amount of freshwater discharged into San Francisco Bay in the form of treated wastewater from the San Jose/Santa Clara treatment plant has increased, however, causing a decline in the salinity of water in portions of the southern bay. This change in the aquatic environment concerns fish and wildlife agencies.³² More reclamation or reuse of treated wastewater, reducing the volume of outflow to the Bay, would help to solve this problem.

Septic Systems: Most unincorporated areas in the County are not served by sanitary sewers. Wastewater in these areas is disposed of through septic tanks. The majority of the unsewered areas in the County are, by necessity, low population density areas. The County Environmental Health Department estimates that the County contains approximately 13,000 permitted septic systems. Most of these septic systems are located in Hillside areas, in unincorporated areas outside of the cities of Gilroy and Morgan Hill in the South County area, in some areas on the valley floor, and in areas outside of the cities of Palo Alto, Los Altos, Los Altos Hills, and Mountain View.³³

In general, septic systems are placed only in areas where they can function well. The life expectancy of a septic system is indefinite as long as the system is properly maintained. Factors that influence the functioning of septic systems include the following:³⁴

- **Soil permeability.** Either undesirably fast or slow percolation rates can require extraordinary design requirements or prevent use of septic tanks entirely.
- **Slope and soil characteristics.** Steep slopes and dense soils can prevent leach fields from functioning properly. A very large part of the County consists of land with steep slopes and soils that are very slow to percolate.
- **Groundwater levels.** High groundwater levels can cause untreated wastewater to mix with surface or near-surface water, degrading water quality.

The County regulates the siting of septic leachfields to ensure that they pose no hazards to the health of local water bodies. These requirements are part of the County's Sewage Disposal G15 Ordinance (see Section B for a discussion of this Ordinance).

Disease-causing pollutants in wastewater can include suspended solids, pathogenic organisms, oxygen-demanding organic chemicals and organisms, viruses, phosphates, sulfates, chlorides, and nitrates. Some viruses have been known to live for up to five years in the soil environment. Fecal microorganisms can cause infectious hepatitis, typhoid fever, bacterial dysentery, and intestinal ailments.

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Draft 1994 General Plan Strategies

The Resource Conservation chapter of the Draft 1994 General Plan contains overall strategies for resource conservation which apply to water resources as well as other resources. These broad strategies are stated below:

- Strategy 1: Improve and update current knowledge of resources.*
- Strategy 2: Emphasize pro-active, preventive measures.*
- Strategy 3: Minimize or compensate for adverse human impacts.*
- Strategy 4: Restore resources where possible.*
- Strategy 5: Monitor the effectiveness of required mitigations.*

Water Supply

The Countywide Resource Conservation Chapter³⁵ contains strategies for water management. No single approach will be sufficient to meet projected needs. A combination of strategies will be needed to prevent future hardships and assure long-term supply. Briefly stated, these are:

- Strategy 1: Conserving and reclaiming to more efficiently use existing water supplies.*
- Strategy 2: Obtaining additional sources of imported water.*
- Strategy 3: Making system and local storage capacity improvements.*
- Strategy 4: Maintaining drought contingency and groundwater basin management plans.*

The Rural Unincorporated Resource Conservation Chapter contains strategies to:

- Strategy 1: Require adequate water quantity and quality as a pre-condition of development approval.*
- Strategy 2: Reduce the water quality impacts of rural land use and development.*
- Strategy 3: Develop Comprehensive Watershed Management Plans.*

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Wastewater

The Rural Unincorporated Health and Safety Chapter³⁶ contains strategies to:

Strategy 1: Prevent wastewater contamination of surface and groundwater supplies.

Strategy 2: Monitor groundwater quality.

Policies and Regulations

This section of the EIR discusses water supply and water quality-related policies, ordinances and regulations in the County that serve to protect the rural unincorporated environment. It begins with policies of the 1980 General Plan that are carried forward to the Draft 1994 General Plan, particularly those that preserve and protect the water resources. This section continues with a discussion of substantive policy revisions in the Draft 1994 General Plan that are intended to strengthen environmental protection. It is followed by a discussion of the South County Joint Planning Plan Policies developed through a joint planning process of Santa Clara County, the City of Morgan Hill and the City of Gilroy. These policies foster cooperation and coordination on issues of environmental concern, including water supply, water quality and wastewater. A discussion of other ordinances and regulations implemented by the County or other levels of government to guide growth in an environmentally sound manner follows the South County Policies. This body of controls provides comprehensive tools to maintain and improve water resources in the rural unincorporated area.

1. Water Supply

A. Plan Policies that Foster Environmental Protection

Policies from the 1980 General Plan

Plan policies call for a comprehensive strategy for meeting the long-term projected water demand in the County. This strategy includes: conservation, reclamation, additional supply, system improvements, drought contingency and ground water basin management. [Policy C-RC 6] Correlated with this is a policy which seeks coordination of land use and growth management with planned water supply for the County. [Policy R-RC 7] Policies also encourage conservation and, use of reclaimed wastewater. [Policies C-RC 9, 13] Rural unincorporated development must demonstrate adequate quantity and quality of water before approval. [Policy R-RC 9] Any system improvements, such as new or expanded reservoirs, should be considered

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part of the long-term strategy, and environmental and financial considerations should be taken into account. [Policy C-RC 15]

Substantive Policy Changes in the Draft 1994 General Plan

There are a number of substantive policy changes and additions to the Draft 1994 General Plan that distinguish it from the 1980 General Plan. The environmental impacts of state and local water supply planning would be taken into consideration by the County. [Policy C-RC 8] Public awareness and education relating to water conservation would be ongoing rather than in response to drought conditions. [Policy C-RC 10] Conservation in all areas (domestic, industrial, agricultural) would be promoted. [Policies C-RC 11, 12] These policies seek to eliminate wasteful practices and implement improved technology. The County should maintain drought contingency plans and groundwater basin management programs to avoid adverse impacts from drought conditions. [Policy C-RC 17]

South County Joint Area Plan Water Supply Policies

New development in South County should not exceed the water supply, and water use should be made efficient through watershed protection, percolation, and conservation. [Policy SC 7.0] Programs to identify and seal abandoned and unsafe wells should be continued to reduce the possibility of contamination. [Policy SC 7.1] The South County jurisdictions should develop a program to track existing water quality, water supply and water flow monitoring programs. This would be used for evaluation and assessment for new programs or monitoring of existing ones. [Policy SC 7.2] Each jurisdiction pumping water should be responsible for knowing the demand and how it affects other pumping from the same aquifer. The jurisdictions should coordinate to assure continued supply of water from San Felipe, and work together to manage the water resources to ensure supply and quality of water. [Policies SC 7.3, 4, 6] Streambeds and other appropriate percolation areas should be protected. [Policy SC 7.5] The water district should continue to develop programs to assure effective water resource management, well monitoring, percolation, reclamation and conservation. Water reclamation facilities should be encouraged to help meet water needs in the South County. [Policies SC 7.7, 9] New development should not exceed the water supply, and use of water should be made more efficient through conservation and reclamation. [Policy SC 7.8]

B. Ordinances and Regulations that Reduce Impacts

The County does not have ordinances that relate to water supply.

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2. Water Quality

A. Plan Policies that Foster Environmental Protection

Policies from the 1980 General Plan

The Plan seeks to reduce pollution of the South San Francisco Bay through enhanced controls and planning with regards to urban stormwater runoff. [Policy C-RC 22] To protect the rural unincorporated areas, Policy R-RC 10A states that without adequate mitigation any rural unincorporated land uses that pose a significant potential hazard to water quality should not be allowed. Impervious surfaces in the immediate vicinity of streams should be minimized, as well as protection of prime areas of percolation. [Policies R-RC 10B, 11] In the rural unincorporated areas subject to groundwater contamination, no excessive concentrations of septic systems shall be allowed and sedimentation and erosion would be minimized through development controls. [Policies R-RC 12, 13] Rural area commercial and industrial uses with the potential for off-site contamination should not be located near surface waters and would be required to reduce potential contamination as a condition of approval. [Policy R-RC 15]

Substantive Policy Changes in the Draft 1994 General Plan

Water quality countywide should be improved to ensure the safety and quality of the water supply, water environment, and habitat. [Policy C-RC 18] Policy C-RC 25 calls for the restoration of wetlands and upland riparian habitat to improve Bay water quality and a comprehensive watershed management plan should be developed to assure protection of regional water supply, watershed and reservoirs. [Policies C-RC 25, 26] Dry wells used for flood control in rural areas should be located and sealed to prevent pollutants in surface runoff from infiltrating groundwater basins. [Policy R-RC 17]

South County Joint Area Plan Water Quality Policies

Water quality should be protected from contamination, and should be monitored to assure that present policies and regulations are adequate. Waste facilities, septic systems and industries using toxic chemicals should be prohibited where their pollutants could come in contact with groundwater, floodwaters, creeks or reservoirs. Land use policies should continue to limit the number of individual septic systems in areas subject to groundwater contamination. In the unincorporated area current County policies regarding septic systems and land use should not be weakened and surface water quality conditions throughout South County should be monitored to determine if changes in regulations are needed. [Policies SC 8.0, 1, 3] The large parcel policies in the South County allow minimal development and limited numbers of septic systems

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in small areas. These policies should be continued in areas where development is expected to be served by sewers. This approach makes it possible to design future urban density subdivisions with smaller lots which are more efficient for sewers in terms of service and cost. [Policy SC 8.2]

Groundwater and surface water quality should be monitored to determine if changes in septic system regulations or land uses are needed. [Policy SC 8.4] Siting and protection of landfill sites, solid waste and hazardous waste site require continued caution so as not to create hazards to groundwater quality. All regulations regarding solid waste disposal should be enforced as well as Regional Water Quality Control Board policies. [Policies SC 8.6, 7, 8] To protect the aquifers special consideration should be given to management of contaminants in groundwater recharge areas where no protective layer exists. [Policy SC 8.13]

Properties located in areas that have soils with rapid water percolation should be protected from development. Any commercial or industrial developments proposed to be located in these areas reviewed by hazardous materials specialists. [Policies SC 8.11, 12]

Individual jurisdictions should continue to monitor wells and to coordinate data. This should include programs to monitor private wells. [Policies SC 8.14, 15]

B. Ordinances and Regulations that Reduce Impacts

The County does not have ordinances that relate to water quality.

3. Wastewater

A. Plan Policies that Foster Environmental Protection

Policies from the 1980 General Plan

Policy R-HS 40 specifies that urban density development and land uses only be located in cities served by centralized wastewater systems. To minimize the likelihood of water contamination, density of development in rural unincorporated areas would be low. Any new rural septic systems would be located where reasonably assured of long-term effectiveness, minimum impact, and not contaminate surface or groundwater or where site characteristics preclude or impede standard operation. [Policies R-HS 41, 42, 43]

Substantive Policy Changes in the Draft 1994 General Plan

In the rural unincorporated areas alternative wastewater systems may be utilized, provided they have local and regional water quality approval and the system is environmentally superior to the use of traditional systems. [Policy R-HS 44] If an alternative system is proposed, it must be shown that a traditional septic system could be constructed and would be adequate; that the alternative system is appropriate and would be effective and beneficial to the environment; that it complies with density requirements and other policies including compliance with Regional Water Quality Control Board requirements; and there is some provision for maintenance and liability. [Policy R-HS 45] Alternative wastewater systems approved for two or more residences must meet the provisions of Policy R-HS 45 and the project sponsor assures that there is an entity responsible for maintenance and liability of the system. [Policy R-HS 46]

South County Joint Area Plan Wastewater Policies

Policy SC 6.0 calls for the expansion of the joint Gilroy/Morgan Hill sewage treatment plant to proceed since additional sewer capacity is essential for further urban development. The total capacity of the facility and its configuration should be consistent with the following policies:

- a. The Cities of Gilroy and Morgan Hill should determine the best method to increase and fund their sewer treatment capacity to facilitate development consistent with their general plans.
- b. The facility should be funded in a manner which considers the financing needs of other infrastructure in South County. [Policy SC 6.01]

The County and water district should assist in the wastewater treatment program. [Policy SC 6.2] San Martin's sewage treatment needs should be determined. [Policy SC 6.3] Beyond those approved, no new land uses required the use of alternative sewage treatment and disposal systems should be permitted until they are determined safe and effective. [Policy SC 6.4]

B. Ordinances and Regulations that Reduce Impacts

Sewage Disposal Ordinance (County Ordinance Sec. B11, Art. 1, 2): this ordinance establishes standards for the approval, installation and operation of individual, on-site sewage disposal systems (septic tank and leachfields) consistent with the appropriate California Regional Water Quality Control Board standards and basin plans. These standards are adopted so as to preclude the creation of health hazards and nuisance conditions and to protect surface and groundwater quality. Systems generating more than 2,500 gallons per day of effluent must be reviewed by

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the appropriate Regional Water Quality Control Board. Percolation tests are required to determine the suitability of a site for leachfields and to determine the amount of leachfields required. The systems are required to be setback a minimum distance from wells, creeks, reservoirs, springs, etc. The County Department of Environmental Health implements this Ordinance and issues the required septic tank permit.

County Ordinance Code (Sec. B11, Art. 3) Private Sewage Disposal in Lexington Basin.

This ordinance sets additional requirements for the establishment of sewage disposal systems in the Lexington Basin in the Santa Cruz mountains above Los Gatos, including limitations regarding adequate lot sizes.

Zoning Ordinance

See General Description under Land Use. Section 47-(d) has Use Permit findings that waste and sanitation facilities shall satisfy applicable County, state and federal requirements and that the use shall not adversely affect water quality.

C. Significance Criteria

Supplementary Document (f,g,h,i) of CEQA states that a project will normally have a significant effect on the environment if it will:

- substantially degrade water quality;
- contaminate public water supply;

- substantially degrade or deplete groundwater resources; or
- interfere substantially with groundwater recharge.

Impacts and Mitigations

Impact 1. Water Supply. More than 90% of South County's water needs are presently met by groundwater.³⁷ This water comes from underground aquifers in the Llagas subbasin. Water enters the subbasin via percolation through the soil; the aquifer is replenished from rainfall, runoff and imported water. Since 1987, Santa Clara County has imported water from the San Felipe Division of the Central Valley Water Project. The Santa Clara Valley Water District makes projections of water demand for the future. These projections take into account the population growth expected in the County. The SCVWD projects that with proper supply and

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demand management there will be adequate water supply to meet the demands throughout the County through the year 2010³⁸ (including the growth projected under the Draft 1994 General Plan). In the event of a critical dry period, the situation would be slightly different, although the SCVWD still expects to be able to meet essential demand. The critical drought period might require the purchase of additional imported water and would necessitate reduced consumption. The use of reclaimed water is encouraged by the Draft Plan and demand management programs would involve use of reclaimed water for landscaping and possible industrial processes. *Given the small amount of cumulative growth in population projected for the next 15 years (the addition of 8,207 new residents in the unincorporated County), large minimum parcel sizes and low overall densities, inadequate water supply would be a less than significant impact.*

Mitigation Measure: No further mitigation is required.

Impact 2. Ground Water Quality. Some pollutant sources affect primarily groundwater quality. Contaminants have access to groundwater in areas with highly permeable soils or rapid percolation or in any areas subject to flooding, streams, creeks or reservoirs which may serve as pathways for surface water to reach groundwater. In some areas of South County (around Morgan Hill and San Martin) the aquifer is unprotected allowing for easier contamination of groundwater. Agricultural activities using pesticides and fertilizers and intensive livestock operations can also contribute to surface and groundwater contamination. Nitrates may be produced by human and livestock waste, nitrogen-based fertilizers and pesticides. Nitrate contamination is believed to result from an accumulation of chemicals and from septic system leachate. Septic systems are the approved system for sewage disposal in the rural unincorporated portions of the County. County policies discourage the use of septic systems for commercial or industrial uses. The County Sewage Disposal Ordinance establishes stringent standards for approval, installation and operation of septic tanks and leachfields. These standards are consistent with California Regional Water Quality Control Board standards. This Ordinance along with the low density of development in the South County and the large parcel sizes would allow for proper sewage disposal. However, groundwater from municipal and private water supply wells in South County have been found to contain nitrate levels greater than the levels allowed by federal safe drinking water standards. The SCVWD is currently preparing a study to be completed in March of 1995 which will determine the sources of nitrate infiltration and develop a management plan. *Nitrate levels in groundwater is a significant impact.*

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Mitigation Measure 1: The County should review the results of the Nitrate Study currently being prepared by the SCVWD and along with SCVWD and other jurisdictions implement the nitrate management plan. *Implementation of the above mitigation measure would reduce the impacts from nitrates to groundwater to a less than significant impact.* [Responsibility; Santa Clara County, SCVWD and other jurisdictions].

Impact 3. Reservoir Water Quality. The SCVWD owns and operates ten reservoirs in the County. The watershed for most of these facilities lies primarily in rural unincorporated areas. These reservoirs store local runoff and imported water. The water contained in these reservoirs is used to fill the underground basins in the County which is then pumped out via wells. To ensure that the County is providing reliable and safe drinking water to County residents, it is necessary to protect the County's reservoir watersheds. Development in the reservoir watersheds is carefully considered. It is essential to maintain water quality and to balance that need with the residential, recreation and other uses of the watershed lands. The County's strategy to develop a comprehensive watershed management plan [Policy R-RC 18], establishes local watershed management as a joint issue of local and countywide jurisdictions to protect local water quality. The SCVWD is currently preparing an in-depth assessment of the impact on reservoir water quality and operations of continued residential and commercial development, continued installation of septic systems, and agricultural practices. This project is currently in Phase I with project completion scheduled for December 1996. The project's final goal will be to develop a watershed protection plan for the County's reservoir watersheds. *Implementation of the recommendations of the reservoir watershed protection plan are intended to reduce impacts to reservoir water quality to a less than significant impact.*

Mitigation Measure: No further mitigation is required.

Impact 4. Nonpoint Source Pollution. Pollution from storm water runoff is referred to as nonpoint source pollution. This type of pollution has many sources including, organic wastes, pesticides, motor fuels and other liquids from roads and parking lots. While urban areas typically have higher levels of nonpoint source pollutants, rural areas in South County are also sources of these pollutants. Pollutants can build up and degrade the water quality and biological health of

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creeks, streams and reservoirs. Any land use changes or development can lead to increases in storm water pollution from increased runoff or construction activities. Water quality degradation is regulated by the National Pollution Discharge Elimination System administered by the San Francisco Bay Regional Water Quality Control Board. Countywide Policy C-RC 22 calls for reduction of pollution through enhanced controls and planning regarding urban stormwater runoff. The minimization of impervious surfaces in the vicinity of streams and reservoirs should be minimized. Policy [R-RC 10B]. Santa Clara Valley Water District Resolution No. 93-59 calls for the proper construction, use and maintenance of storm water infiltration to reduce the flow of contaminants. Policy R-RC 17 calls for dry wells used for flood control in rural areas to be located and sealed to prevent pollutants from infiltrating groundwater basins. *Implementation of the policies in the Draft 1994 General Plan and Resolution 93-59 would reduce nonpoint source pollution to a less than significant impact.*

Mitigation Measure: No further mitigation is required.

Impact 5. Well Contamination. Functioning wells in South County are of concern if they were installed before 1975. Some existing wells may have been located too close to septic system or other waste water disposal systems and could become contaminated. These existing wells may not meet the current well standards which require a 50-foot sanitary seal. Existing older wells that do not meet these requirements have the greatest risk of transferring contaminants from the soil to the ground water. Any new wells are required to comply with the California Health and Safety Code and the California Code of Regulations, Title 22. South County Joint Area Plan Policies SC 8.14, 15 call for continued monitoring of wells and allow for coordination of data between jurisdictions as well as expansion of programs to test and perform periodic retesting of private wells to include some tests for volatile organics and bacteria not usually performed on private wells. *The discontinued use of substandard wells, the continued and expanded well monitoring program and the state standards required for new wells would make well contamination a less than significant impact.*

Mitigation Measure: No further mitigation is required.

Impact 6. Inadequate Wastewater Treatment Capacity. Sewer services are currently provided only to the incorporated areas of the South County. The Gilroy/Morgan Hill sewage treatment plant also handles solids from septic tanks in the South

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County. Expansion of this plant is currently underway and completion is expected in September 1994. This expansion will allow for the growth projected in the Cities of Gilroy and Morgan Hill as well as to continue to serve the needs of the septic systems in South County. Within the life of the Draft 1994 General Plan, no sewer system is projected for the community of San Martin. San Martin will continue to utilize septic systems for wastewater disposal.³⁹ *Due to the increased capacity of the Gilroy/Morgan Hill sewage treatment plant, and the small amount of development projected under the Plan, inadequate wastewater treatment capacity is a less than significant impact.*

Mitigation Measure: No further mitigation is required.

Endnotes to Water Supply and Wastewater Chapter

1. Santa Clara Valley Water District, "Water Supply and Distribution Facilities" brochure, March 1990.
2. M.A. Sylvester, Water Quality and Flow of Streams in Santa Clara Valley, Santa Clara County, California, 1979-1981, U.S. Geological Survey, 1986.
3. Ibid.
4. Ibid.
5. Ibid.
6. Ibid.
7. County of Santa Clara Department of Planning and Development, Alternative Futures: Trends & Choices (Report of Santa Clara Strategic Vision Steering Committee), October 1990, page 187.
8. Letter to Natalie Macris, PAD, Inc., from Marc J. Klemencic, Supervising Engineer, Design Coordination Division, Santa Clara Valley Water District, May 18, 1994.
9. Ibid.
10. Ibid.

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11. Ibid.
12. Ibid.
13. Ibid.
14. Ibid.
15. Ibid.
16. Ibid.
17. Ibid.
18. Ibid.
19. Ibid.
20. County of Santa Clara Department of Planning and Development, Alternative Futures: Trends & Choices (Report of Santa Clara Strategic Vision Steering Committee), October 1990, page 178.
21. Santa Clara Valley Water District, Groundwater Management in Santa Clara Valley, April 1987.
22. Ibid.
23. County of Santa Clara Department of Planning and Development, Alternative Futures: Trends & Choices (Report of Santa Clara Strategic Vision Steering Committee), October 1990, page 175.
24. Draft Countywide Resource Conservation Element, June 29, 1993, page 15.
25. Santa Clara Valley Water District, Llagas Groundwater Basin Nitrate Study, Nitrate Source Area Identification (Draft), March 1994.
26. Letter from Marc. J. Klemencic, P.E., Supervising Engineer, Design Coordination Division, Santa Clara Valley Water District, to Hugh Graham, Santa Clara County Office of Advance Planning, February 28, 1994.
27. Draft Rural Unincorporated Resource Conservation Chapter, November 18, 1993, pages 12-13.

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28. County of Santa Clara Department of Planning and Development, *op. cit.*, page 184.
29. San Francisco Bay Regional Water Quality Control Board, "Sample Language to Include in Environmental Impact Reports for Addressing Storm Water Quality Issues in Environmental Documents," page 1.
30. Telephone communication with Mark Fachin, Associate Civil Engineer, City of Gilroy, May 11, 1994.
31. County of Santa Clara Department of Planning and Development, Alternative Futures: Trends & Choices (Report of Santa Clara Strategic Vision Steering Committee), October 1990, page 167.
32. County of Santa Clara Department of Planning and Development, *op. cit.*, page 169.
33. Telephone conversations with Art Kaupert, Santa Clara County Environmental Health Department, May 18, 1994, and May 24, 1994.
34. Draft Rural Unincorporated Health and Safety Chapter, pages 38-39.
35. Countywide Resources Chapter, page 11, June 29, 1993 draft.
36. *Ibid*, Rural Unincorporated Health and Safety Chapter pages 44-48, February 14, 1994 draft.
37. County of Santa Clara, Planning Office, South County Joint Planning Program, September 1986., page 3-14.
38. Jennie Micko, Supervising Engineer, Santa Clara Valley Water District, telephone conversation, August 1994.
39. Bob Sturdivant, Chief Planning Officer, Santa Clara County Planning Office, telephone conversation, August 1994.

CHAPTER 5N PUBLIC SERVICES

FIRE

Environmental Setting

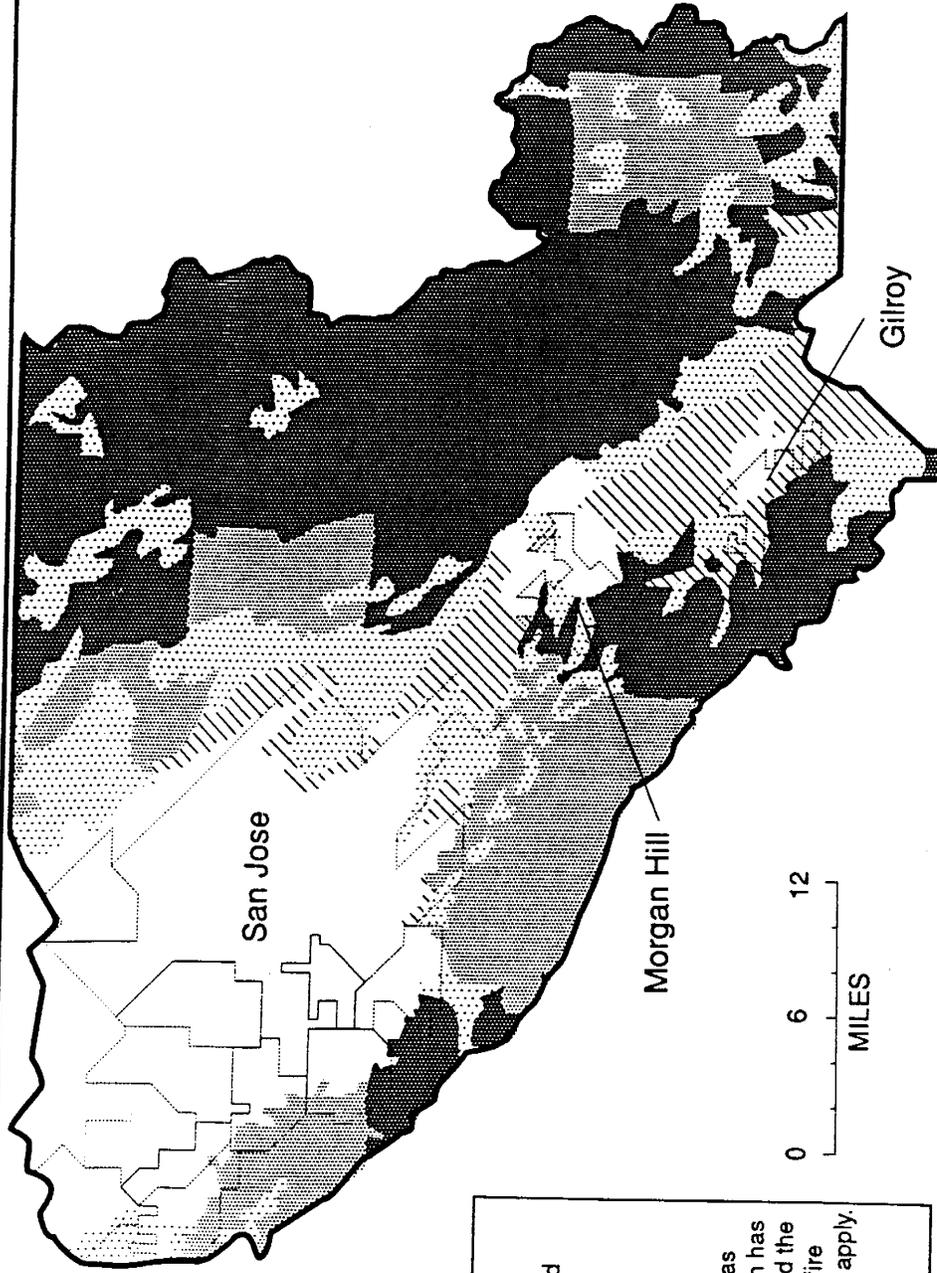
Fire Protection Services: Fire protection services in Santa Clara County are currently provided by ten municipal fire departments, six County fire districts, two local fire districts, and the California Division of Forestry (CDF). The cities of Cupertino, Los Altos Hills, Los Gatos, Monte Sereno and Saratoga receive fire protection services from one or more fire protection districts. The Santa Clara County Central Fire Protection District (SCCCFPD) and CDF serve a majority of the unincorporated areas. SCCCFPD staff indicate that they are currently working near capacity.¹ CDF indicates that their current staffing levels are adequate.²

Fire protection services vary throughout the unincorporated portions of Santa Clara County. Unincorporated pockets within cities are normally served by the city's fire departments. Lands adjacent to cities or on the valley floor are normally served by fire districts. Much of the unincorporated land of the County lies in the two mountain ranges, and falls under the jurisdiction of the California Division of Forestry. CDF provides fire protection during the summer and fall fire season, but limits its operations substantially in the winter season. CDF does, however, have aircraft permanently based in the County that are capable of reaching the scene of a fire within 5 to 15 minutes.

Fire Hazards: In rural, unincorporated areas of Santa Clara County the combination of weather patterns, vegetation and topography creates extremely dangerous fire hazards at certain times of the year. With the exception of grasslands, all of the mountainous land in the County have been given either an Extreme or High fire hazard rating by the California Division of Forestry (see Figure 5N-1). This rating is based, in part, on the inaccessibility of some regions and the lengthy response times needed to get to the more distant areas. The fire hazard is lowest on the flat, valley floor; however, no rural areas in the County have a low fire hazard rating.

According to The County Fire Marshal, residential land uses present the greatest demand for fire services. The location and types of dwelling units also influence demand. Commercial and industrial land uses, while demanding less frequent fire protection service, produce fires that are more difficult to fight than do residences. Industrial fires are more likely to involve releases of hazardous materials. Commercial and industrial growth not only increases the demand for fire services, but also taxes fire department capabilities to deal effectively with hazardous materials emergencies.

Figure 5N-1 Relative Fire Hazard



LEGEND

-  Areas of Moderate Fire Hazard
-  Areas of High Fire Hazard
-  Areas of Extreme Fire Hazard
-  Agricultural and Suburban Areas
Areas where natural vegetation has been substantially modified and the California Division of Forestry fire hazard rating system does not apply.
-  Urban Services Areas

 NORTH
NO SCALE

Sources: Santa Clara County Planning Office

The Relative Fire Hazard Rating Map does not directly indicate the likelihood of fires being started. It does indicate the severity of conditions in each area which might contribute to the start of a fire and is a rough guide to the potential for a fire to rapidly spread into a major blaze.

Draft 1994 General Plan Strategies

The Rural Unincorporated Health and Safety Chapter contain the following strategies to address development in areas of high fire hazard:

Strategy 1: Inventory hazards and monitor changing conditions

Strategy 2: Maintain low resident population densities within high hazard areas.

Strategy 3: Design, locate and regulate development to avoid or withstand hazards.

Strategy 4: Reduce the magnitude of the hazard, if possible.

Strategy 5: Provide public information regarding natural hazards.

Policies and Regulations

A. Plan Policies that Foster Environmental Protection

Policies from the 1980 General Plan

Maintain up-to-date inventories and mapping of relative fire hazard areas in rural unincorporated lands. [Policy R-HS 6g] Areas of significant natural hazards shall receive land use designations that minimize public exposure and resident population levels. [Policy R-HS 7] Development in rural areas with known natural hazards must be designed, located or regulated to avoid or reduce risks to acceptable levels. [Policy R-HS 9] In all designated hazard areas, projects will be designed and conditioned to avoid placement of structures where they would be directly jeopardized, increase hazard potential, or heighten risks to neighboring properties. [Policy R-HS 10] Rural areas with generally inadequate access for fire protection services should be examined for possible remedies such as alternative access, improvements to remedy hazardous situation financed by those who would benefit and traffic routing and controls to discourage use of local roads by non-residents. [Policy R-HS 23] Dead end roads shall not be extended unless approved by the Fire Marshall or other fire authority. [Policy R-HS 24] Hydrants and water systems are recommended for rural areas or communities in high fire hazard areas that have developed under densities greater than generally prescribed under current County land use policies. [Policy R-HS 26] Projects shall be reviewed by County Fire Marshall for code compliance and further conditions of approval necessary for public health and safety. [Policy R-HS 28] Policy C-HS 40 cited under police protection also applies to fire protection services.

Substantive Policy Changes in the Draft 1994 General Plan

Encourage new development to use fire retardant materials and landscaping beyond that required by current building and development codes in areas of high fire hazard. [Policy R-HS 27] Where feasible, controlled burns should be used by appropriate authorities to reduce dangerously high fuel loads in high fire hazard areas. [Policy R-HS 33]

B. Ordinances and Regulations that Reduce Impacts

The Uniform Fire Code prescribes regulations consistent with nationally recognized good practice for safeguarding life and property to a reasonable degree from the hazards of fire. The Uniform Building Code requires fire retardant roofing materials in high hazard areas. The County fire code requires that vegetation be cleared and managed within approximately 30-50 feet of a residence or other development, and that overhanging branches be removed. Proposed development is reviewed to determine conformance with Uniform Fire Code standards. Regulations relating to fire prevention and safety are implemented by the County Fire Marshal's office.

C. Significance Criteria

The CEQA Guidelines do not state specific significance criteria for fire services.

Impacts and Mitigations

Impact 1. Fire Services. Growth projected under the Draft 1994 General Plan would impact fire protection providers in several ways. First, the rural unincorporated area is, for the most part, located the farthest away from public services, thereby resulting in response times of up to two hours.³ By this time, significant damage or loss of life could occur. Second, residential development in these areas are of low-density, so buildings tend to be dispersed and costly to serve. Third, there are often high fuel loads in rural unincorporated areas, increasing the potential intensity of a fire. Fourth, residential development in the more remote areas faces the risk of exposure to wild fires. Fifth, the Draft 1994 General Plan notes that earthquakes pose the single greatest threat to rural areas subject to high fire hazard because groundshaking may sever water mains, topple empty water storage tanks and/or break natural gas lines.

The Rural Unincorporated Health and Safety Chapter contains several policies with regard to fire services. These focus on prevention and methods to reduce the risk of fires, in recognition of the fact that remote areas by their very nature are not going to receive quick response times. Some of the relevant policies are R-HS 6g which recommends an inventory and mapping of the Relative Fire

Hazard Rating so that the public and service providers understand where the greatest dangers lie; R-HS 7 which indicates that areas of especially high or extreme fire hazard shall be designated as Resource Conservation Areas with generally low development densities in order to minimize public exposure to fire hazards; R-HS 9 which states that development in rural unincorporated areas affected by natural hazards be designed, located, and otherwise regulated to avoid or reduce risks to an acceptable level; R-HS 10 which recommends project design to avoid placement of structures and improvements where they would increase hazard potentials; policies R-HS 23-28 which address the type and layout of development to ensure adequate access and water supply; and R-HS 33 which recommends controlled burns and other forms of vegetation management.

CDF has indicated that response times would not be affected by future development in the unincorporated areas⁴. However, they have experienced funding cutbacks in the past and expect them to continue in the future. This usually results in a decreased level of staff available to respond. The Santa Clara County Central Fire Protection District (SCCCFPD), which covers a majority of unincorporated areas not covered by CDF, has indicated that although they are currently operating near capacity levels, that due to the relatively small amount of growth projected under the 1994 Draft General Plan, *no significant impacts to fire services are anticipated.*

Mitigation Measure: No further mitigation required.

Impact 2. Cumulative Fire Services Impact. There would be a cumulative population increase of 8,207 persons in the unincorporated area over the 15-year life of the Plan. This would result in 2,800 additional dwelling units, a majority being lots of record which are not under the County's control. With orderly urban expansion and implementation of the policies discussed under Impact 1, County staff has indicated *that the small level of growth expected is not anticipated to result in significant cumulative fire services impacts.*⁵

Mitigation Measure: No further mitigation required.

POLICE

Environmental Setting

Santa Clara County residents receive police services from eleven municipal police departments and the County Sheriff's Department (see Table 5N-1). The Sheriff's Department serves the unincorporated areas of the County, and provides contractual police service to the communities

of Los Altos Hills, Cupertino, Saratoga and Monte Sereno. The department's staff includes 338 deputy sheriffs, 47 sergeants, seven lieutenants, two captains, three assistant sheriffs, and 117 non-badge personnel. The department maintains a headquarters located at 55 West Younger Avenue in San Jose, as well as the Westside Substation located at 14374 Saratoga Avenue in Saratoga and South County Substation in San Martin.⁶

Many police departments in Santa Clara County are finding it difficult to maintain their service standards in the face of increasing demand. Factors that influence demand include the number of areas to patrol, the density of the areas, the crime rate, and the availability of other services to cope with some of the duties the police force currently undertakes. The Sheriff's Department average response time to calls is seven minutes. The Sheriff's Department has indicated that its staffing levels were not adequate to meet the current demand for services, and that the department requested a staffing increase of at least 10% to meet current requirements. The Sheriff requested 31 new deputies for the 1994/95 fiscal year.⁷ Most demands for the Sheriff's services comes from the more populated Urban Services Areas. The County Board of Supervisors approved a Sheriff's budget which allowed for approximately 10 new deputies. The board believes this to be an adequate overall budget within which the Sheriff can allocate his resources according to the priority of need.

As part of its law and justice responsibilities, the County also maintains the County jails and court system. Recent studies have documented increases in the number of criminal court cases, the rate of incarceration (i.e., the percentage of County residents incarcerated in the County justice system), and the county's jail population. Overall, however, the rate of serious crime (e.g., homicide, rape, robbery, theft, motor vehicle theft, burglary, aggravated assault) decreased over the period from 1979 to 1988.⁸

Policies and Regulations

There are no strategies specifically related to police protection services.

A. Plan Policies that Foster Environmental Protection

Policies from the 1980 General Plan

Policy C-GD7 references "joint urban development policies" and notes that urban expansion should occur on a staged, orderly basis, consistent with plans and the availability of needed urban services and facilities. Urban Service Areas (USAs) should only include lands that can be provided with public infrastructure and services. [Policy C-GD 3a] For land outside cities' USAs, 'Resource Conservation Area' designations are intended to encourage only uses and densities appropriate to rural areas that also serve to minimize demand for and cost of providing public services and facilities. [Policies LU 3 g, & R-GD 3c] Policy C-GD 43 recommends creation of a countywide plan for growth and development, infrastructure capacity, and

preservation of open space and natural resources. The plan should be jointly prepared and adopted by the public agencies with these respective responsibilities. Policy [C-GD 45 e] recommends that the countywide plan for growth integrate the established system of growth management and staged, orderly urban expansion adopted by the cities, LAFCO and the County and should address the collective impacts of projected development on infrastructure and public services. Policy C-HS 40 requires that the health and safety of all County residents will be ensured by the provision of health and safety facilities necessary to support existing and projected demand.

Substantive Policy Changes in the Draft 1994 General Plan

Continued efforts on the part of service providers (special districts and cities) to combine resources, achieve economies of scale, and collectively develop needed infrastructure capacity should be encouraged. [Policy C-GD 53]

B. Ordinances and Regulations that Reduce Impacts

There are no planning ordinances related to police protection services.

C. Significance Criteria

The CEQA Guidelines do not state specific significance criteria for police services.

Impacts and Mitigations

Impact 1. Police Services. The County has determined the adequacy of current staffing levels of the Sheriff's Department based on information from numerous sources and funding availability. The County Board of Supervisors approved a budget increase for the Sheriff for the 94/95 fiscal year which it believes provides adequate overall resources which the Sheriff can allocate according to need.

The projected 400 new residential subdivision units projected under the Draft 1994 General Plan would generate a population of 1,172 by the year 2010, or 78 persons per year. With a generation rate of 1 officer/1,000 population, the projected growth would result in the need to hire one additional deputy over the life of the plan. *According to the County staff this is not considered a significant impact.*⁹

TABLE 5N-1
Sheriff and Police Services, Santa Clara County

City or Town	Police Service Provided By	
	Local Police Dept.	County Sheriff's Dept.
Campbell	X	
Cupertino		X
Gilroy	X	
Los Altos	X	
Los Altos Hills		X
Los Gatos	X	
Milpitas	X	
Monte Sereno		X
Morgan Hill	X	
Mountain View	X	
Palo Alto	X	
San Jose	X	
Santa Clara	X	
Santa Clara County (unincorporated areas)		X
Saratoga		X
Sunnyvale	X	

Source: County of Santa Clara Planning Office

Impact 2. Cumulative Police Protection Impacts. There would be a cumulative population increase of 8,204 in the unincorporated area over a 15-year life of the Draft General Plan. This would average 547 persons per year, allowing for the opportunity to gradually increase police services as population grows. Some of this growth would be in future USAs and would be less costly to serve than scattered development. Although there are no policies that specifically address police services, policy C-GD 7 recommends urban expansion be planned and staged on an orderly basis, consistent with applicable plans and the availability of needed urban services and facilities. Policy C-GD 3a recommends that future USAs should generally include only those areas which could reasonably be provided with public facilities and services. *With orderly urban expansion and the small amount of growth expected, this impact is not expected to be significant.*

Mitigation Measure: No further mitigation required.

SCHOOLS

Environmental Setting

School Districts and Services: Santa Clara County is served by 37 school districts. Of this total, 33 are K-12 (Kindergarten through 12th grade) school districts or portions thereof, and 4 are Community College Districts. These public school districts encompass 229 elementary schools, 52 middle schools, 46 high schools, and 8 community colleges. San Jose State, Stanford, and Santa Clara Universities are also located in the county, as are a number of smaller private schools.

The Santa Clara County Office of Education (COE) is an intermediate educational service agency that serves as a link between the California State Department of Education and the county's 37 school districts. It provides direct and indirect services and programs to students, teachers, staff, schools, and school districts. Many COE services are mandated by the State of California.

Some direct services include special education, alternative education, child development, migrant education, and Head Start. The COE also coordinates workshops for improving teacher's and administrator's skills, provides films and videos for classroom use, transports special education students, and operates community education programs. Students served range in age from 18 months to 22 years, and have diverse needs.

Enrollment: On the countywide level, the annual increase in the school age population for the 1980s was less than the expected 3.6%, due in large part to a migration of younger families out of the County to areas with less expensive housing. Urban development in the southern

portions of the County has caused school districts in this area to grow more quickly than in the northern portions of the county.

Enrollment Increases in the Unincorporated Area. An analysis of the geographic distribution of single family building permits indicates that the school districts estimated to receive the greatest percentage impact from unincorporated development were Los Gatos, Gilroy, and Morgan Hill.¹⁰ The subdivision applications received during the 1980-1993 period also indicates that the Morgan Hill Unified and the Gilroy Unified school districts have had the highest number of new parcels created.

As shown in Table 5A-2 during the 1980-1993 period, a total of 2,241 single-family units were constructed in the unincorporated area. Of the total 2,241 single family housing units built during this period, 240 units were constructed in the Los Gatos Joint Union school districts; 352 units in the Gilroy Unified school district; and 591 units in the Morgan Hill Unified school district.¹¹ The areas defined in 5A-2 are not the same as school district boundaries (i.e., Morgan Hill on 5A-2 is not the same as Morgan Hill school district). This growth rate translates to an average of 17 new single family housing units per year in Los Gatos, 25 units in Gilroy, and 43 units in Morgan Hill.¹²

This increase is important to note because some schools in the Morgan Hill and Gilroy school districts have already reached their capacity. Permanent school facilities in the Gilroy Unified School District are overcrowded and require the use of over 100 portable classrooms. In addition, the Gilroy Unified School District has two year-round elementary schools in operation to reduce the impacts of overcrowding.¹³ The most recent figures for the Gilroy Unified School District show an enrollment of 8,287 students and a capacity for 8,334. District officials indicate that 14 of the portable classrooms are in use on a waiver good only for the '94-'95 school year. Capacity will drop to 7,914 without these temporary classrooms.

Overall numbers show the Morgan Hill Unified School District operating near capacity, with 8,711 enrollment and 9,305 capacity. It should be noted, however, that several schools within the district are operating over capacity levels. Approximately 3,000 students are currently housed in portable classrooms (100 portables), of which the district owns 67 out right and is renting the remaining 33. District officials indicate that the capacity figures are somewhat misleading in that they must provide classrooms for all students within the district. Therefore, overall capacity will always be equal to or greater than enrollment. In addition, the greatest amount of overcrowding occurs in the elementary schools, whereas some high schools are operating well under capacity. It is not possible, however, to utilize the extra high school capacity for the elementary students. District officials indicate that approximately 10-20% of their student population is derived from the rural unincorporated areas.¹⁴

Current figures for the Los Gatos Unified School District indicate it is operating over capacity as well, with enrollment of 2,455 and capacity of 2,325¹⁵.

The trend toward long-term residency of recreational vehicle (RV) parks has also affected school enrollment. Recent experience in the Morgan Hill Unified School District has indicated that RV parks in the area generate a student population. Consequently, the County requires that, prior to issuance of use permits for RV parks, the County Planning Commission must find that the school district in which the RV park is located has indicated that school impact fees will be paid (see "Budget Issues" below) or that the district will not be affected by the proposed RV park development.

Increasing Immigrant Enrollment. A major challenge encountered in all districts is the increasing number of immigrant families with special language and social needs. In 1977, non-white and Hispanic students comprised 30% of the total enrollment in Santa Clara County. In 1989 non-white and Hispanic children comprised the clear majority of the K-12 student population. It is estimated that 50 different languages are spoken by local students. In attempting to respond to the language needs of this student population, the County is experiencing shortages of bilingual teachers.

Budget Issues: Schools and universities throughout the state are experiencing budget constraints, largely due to restrictions and uncertainties in state and federal funding. As a result, certain programs, especially "extras" such as music and physical education, have been scaled back or cut entirely, and school supplies are limited. Local universities have raised tuition and reduced the number of classes available. Due to these factors, an increasing number of college-age students are seeking admission to the community college system. That system is also facing budget constraints, and has had to raise tuition and limit classes as well.

State law authorizes school districts to levy school impact fees for new development. The fees are currently set at a maximum of \$1.72 per square foot of residential development and \$0.28 per square foot of commercial development.

Policies and Regulations

A. Plan Policies that Foster Environmental Protection

Policies from the 1980 General Plan

Proposals for new residential development in locations where school overcrowding exists or would result should be reviewed and conditioned to adequately mitigate adverse impacts. [Policy C-GD 54] Coordination between school districts and cities should be improved in order to resolve problems stemming from urban growth and development. [Policy C-GD 55]

Substantive Policy Changes in the Draft 1994 General Plan

No new policies have been recommended to address school impacts.

B. Ordinances and Regulations that Reduce Impacts

The RV Park Ordinance states that prior to issuance of a use permit to allow RV parks, the planning commission must make the following findings. The school district in which the project is located has indicated in writing that the school impact fee requirements will be met to its satisfaction or that the school district is not impacted.

C. Significance Criteria

The CEQA Guidelines do not contain specific significant criteria for school services.

Impact 1. School Enrollment. School enrollment attributable to growth in the rural unincorporated area can be estimated using the residential development information provided above, and applying a student generation rate of 0.75 pupils per single-family detached dwelling units (K-12 combined). This would result in approximately 32 students per year for Morgan Hill, 19 students per year for Gilroy, and 13 students per year for Los Gatos. (Actual numbers may be smaller due to the fact that lower ratios exist for single-family attached and multi-family housing units). As noted above, the Los Gatos, Gilroy and Morgan Hill schools are already at capacity. Policies C-GD 54-55 of the Draft 1994 General Plan specifically address school issues. Policy C-GD 54 states that proposals for new residential development in locations where school overcrowding exists or would result from planned levels of growth should be reviewed and conditioned to adequately mitigate adverse impacts. Policy C-GD 55 recommends coordination between school districts and cities be improved to the extent necessary to resolve common problems stemming from urban growth and development. *Increased enrollment from the rural unincorporated area would have a significant impact on schools that are already overcrowded.*

Mitigation Measure 1: The County should more clearly define how projects approvals can be conditioned under Policy C-GD 54 to mitigate school impacts. This would enable both project sponsors and school districts to understand and anticipate how school impacts would be handled. [Responsibility: Santa Clara County].

Mitigation Measure 2: Developer fees, which are usually assessed at the maximum rate allowed by law, often mitigate only a small portion of the cost of the school facilities that must be provided for additional students generated by new development, especially for those

districts operating near or over capacity. To address this shortfall in funding, school impacts can be addressed by a variety of funding mechanisms including:

- Mello-Roos Community Facilities Districts, which creates a funding base for the issuance of bonds to acquire school sites and remodel or construct new school facilities;
- supplemental fees provided by developers;
- school construction jointly funded by public agencies; and
- dedication of sites or site improvements by developers.

The County should explore these mechanisms with the school districts and project sponsors to offset the impacts of growth in the rural unincorporated area. This will only be feasible for new residential subdivisions over which the County has approval authority. *If successfully implemented, this measure could reduce school impacts to a level of insignificance for projects over which the County has approval authority.* [Responsibility: Santa Clara County, School Districts and Project Sponsors].

Impact 2. RV Parks. As noted in the Land Use section of this EIR, RV parks are permitted uses in Hillside and Roadside Service areas. Several projects have been proposed in different areas of the County. RV parks are now coming under scrutiny as impacting schools because many of the parks are housing long-term residents. Because of the mix of long-term and transient residents, it is not possible to quantify the number of students that might be generated by RV parks located in unincorporated areas. The State of California Department of Housing and Community Development (HCD), which regulates RV parks, has indicated that the RV parks are charged school impact fees for their commercial structures (i.e., club house, recreation center) and that the impact fees for the RV spaces themselves are negotiated between the school district, the local planning department, and HCD. Through both the County use permit process and the HCD RV park permitting process, and in accordance with the School Facilities Financing Act, regulations and processes are in place to address the school impacts of RV parks. *If successfully implemented, no significant school impacts are expected as a result of new RV parks¹⁶.*

Mitigation Measure: No further mitigation is required.

Impact 3. Cumulative Impacts. Countywide, many school districts are operating at or near capacity (capacity is often kept ahead of enrollment only by use of portable classrooms). Additionally, many districts are finding that developer fees do not adequately compensate for the additional students received.

Cumulative growth under the 1994 Draft General Plan includes 2,401 projected lots of record, plus the 400 dwelling units projected to occur on new parcels created under the Plan. Even though the County's contribution toward this cumulative impact would be considered incremental, *for districts currently operating at or near capacity, this would result in a significant cumulative impact.*

Mitigation Measure 1: The solution to cumulative school impacts is beyond the scope of this EIR. School impacts are only partially and indirectly under the control of the cities and County government. School Districts are independent authorities that derive most of their funding from the state government, which limits local control and the ability of local government to mitigate impacts. The most obvious way in which local decisions impact schools is by approving development projects which bring in families with school age children. It follows that school impacts can be mitigated by approving fewer projects. As this EIR has shown, Santa Clara County anticipates very few project approvals and the bulk of the growth (84%) will come from existing lots of record. Therefore, any reduction in discretionary approvals will have little overall effect on the demand for schools. *The cumulative impact on schools is a significant unavoidable impact of growth.*

SOLID WASTE COLLECTION AND DISPOSAL

Environmental Setting

Waste Generation: A January 1992 study conducted for the County found that unincorporated areas dispose approximately 93,000 tons of solid waste per year (see Table 5N-2). Residential

uses are the largest waste source, contributing approximately 38% of the total waste stream. Other sources include commercial uses (22%), industrial uses (24%), and "self-haulers" i.e., members of the public who haul waste directly to disposal facilities (17%). Residential,

commercial, and industrial uses also generate varying quantities of hazardous wastes. See Chapter 5I (Hazardous Substances) for a discussion of this waste stream.

Service Areas: Seven solid waste management districts serve Santa Clara County: five major districts plus two smaller districts, one responsible for the Lexington Hills/Redwood Estates area and the other responsible for serving the Stanford University area (see Figure 5N-2). Each district is contracted to a different solid waste collector.

Landfills: As shown in Figure 5N-3, a total of nine landfills currently serve Santa Clara County: Guadalupe, Kirby Canyon, Mountain View (Vista Site), Newby Island, Pacheco Pass, Palo Alto, Santa Clara (All Purpose Landfill), Sunnyvale, and Zanker Road. Four sites (Mountain View, Palo Alto, Santa Clara, and Sunnyvale) are publicly owned, and the remaining five are privately owned. Except for the Palo Alto site, all landfills are privately operated.¹⁷ In addition, Owens-Corning Fiberglass Corporation owns and operates a non-permitted disposal site in northern San Jose (shown in Figure 5N-3) for the disposal of wastes generated at their Santa Clara operations. The facility is not open for public use and is undergoing permitting procedures through the City of San Jose.

According to the Santa Clara County Solid Waste Management Plan (SWMP, 1989 revision), the County had between 24 and 32 years of remaining refuse capacity, depending on waste reduction measures. Using the then-current rate of fill of approximately 1.8 million tons per year, and an annual growth rate of 1.1%, the SWMP projects 24 years of remaining capacity. The Integrated Waste Management Act of 1989, discussed below, requires a 25% reduction in waste streams by 1995. With achievement of a 25% reduction, the plan projects 32 years of remaining capacity.¹⁸

Land disposal sites are classified in three categories according to the toxicity of the wastes they are to receive. Class I sites are solid, liquid, or dry hazardous waste landfills, Class II landfills are approved for containment of designated non-hazardous solid and inert wastes, and Class III sites are standard municipal solid waste landfills, accepting only solid and inert non-hazardous wastes including dewatered sludge and acceptable incinerator ash. All nine landfills in Santa Clara County are classified as Class III facilities.¹⁹

Resource Recovery: "Resource recovery" refers to all forms of materials and energy reclamation from the waste stream. A significant proportion of the waste stream is recyclable.

TABLE 5N-2
Average Quantity of Disposed Waste in Unincorporated Areas
(in tons per year)

Material	Waste Source				Total Disposed
	Residential	Commercial	Industrial	Self-Haul	
Paper	12,026	9,792	5,953	1,891	29,662
Plastics	2,728	2,253	2,416	817	8,214
Glass	1,375	829	324	92	2,520
Metals	1,417	1,076	2,109	1,167	5,769
Yard Waste	10,541	1,642	2,348	3,520	t 18,051
Other Organics ¹	6,236	4,746	5,789	3,526	20,297
Other Wastes ²	599	306	3,126	4,518	8,549
Special Wastes ³	80	28	4	3	116
TOTAL	35,001	20,672	22,073	15,534	93,281

Table Notes: Totals do not sum exactly due to rounding.

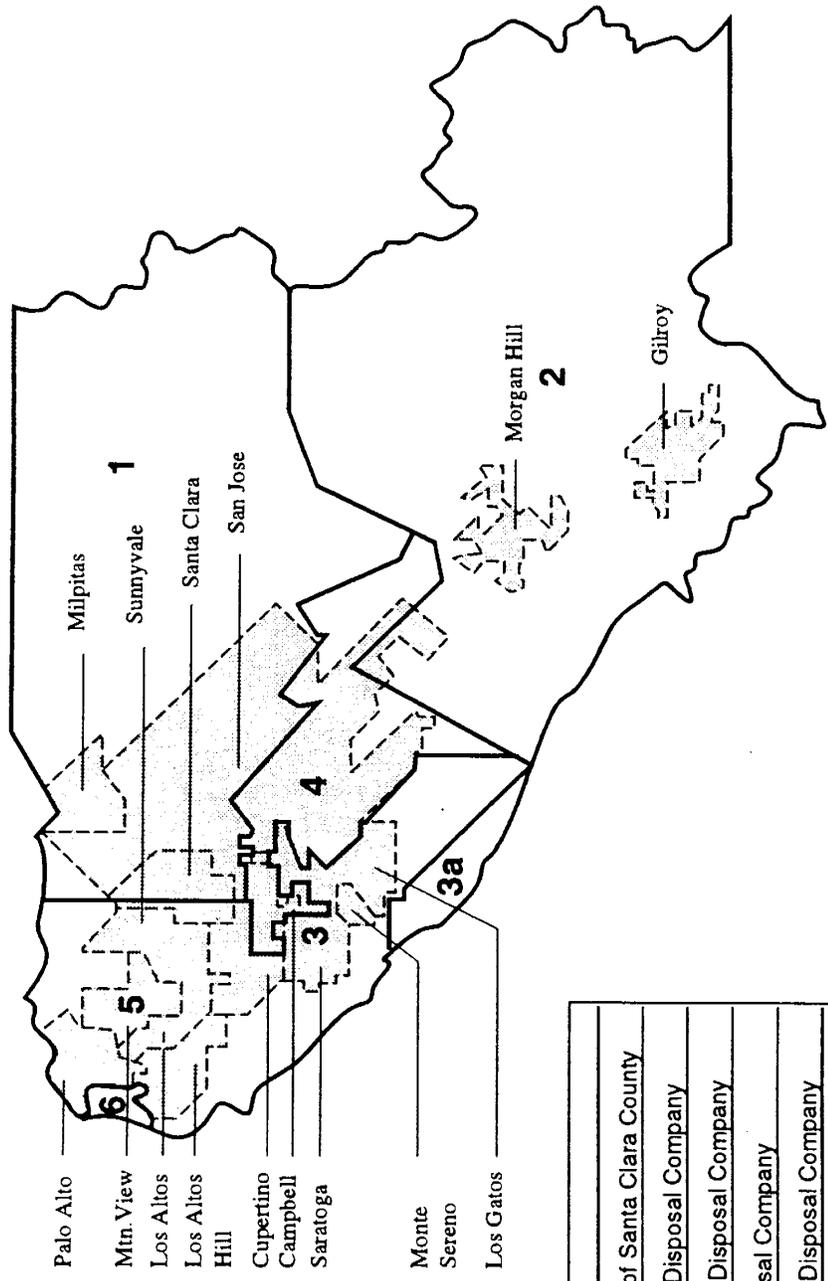
¹ Includes food, tires/rubber, wood, agricultural crop residue, manure, textiles/leather, and other miscellaneous organics.

² Includes inerts and household hazardous wastes.

³ Includes small household appliances.

Source: County of Santa Clara, *Unincorporated Area Source Reduction and Recycling Element, Disposed Waste Analysis, January 1992.*

Figure 5N-2 Garbage Collection Districts

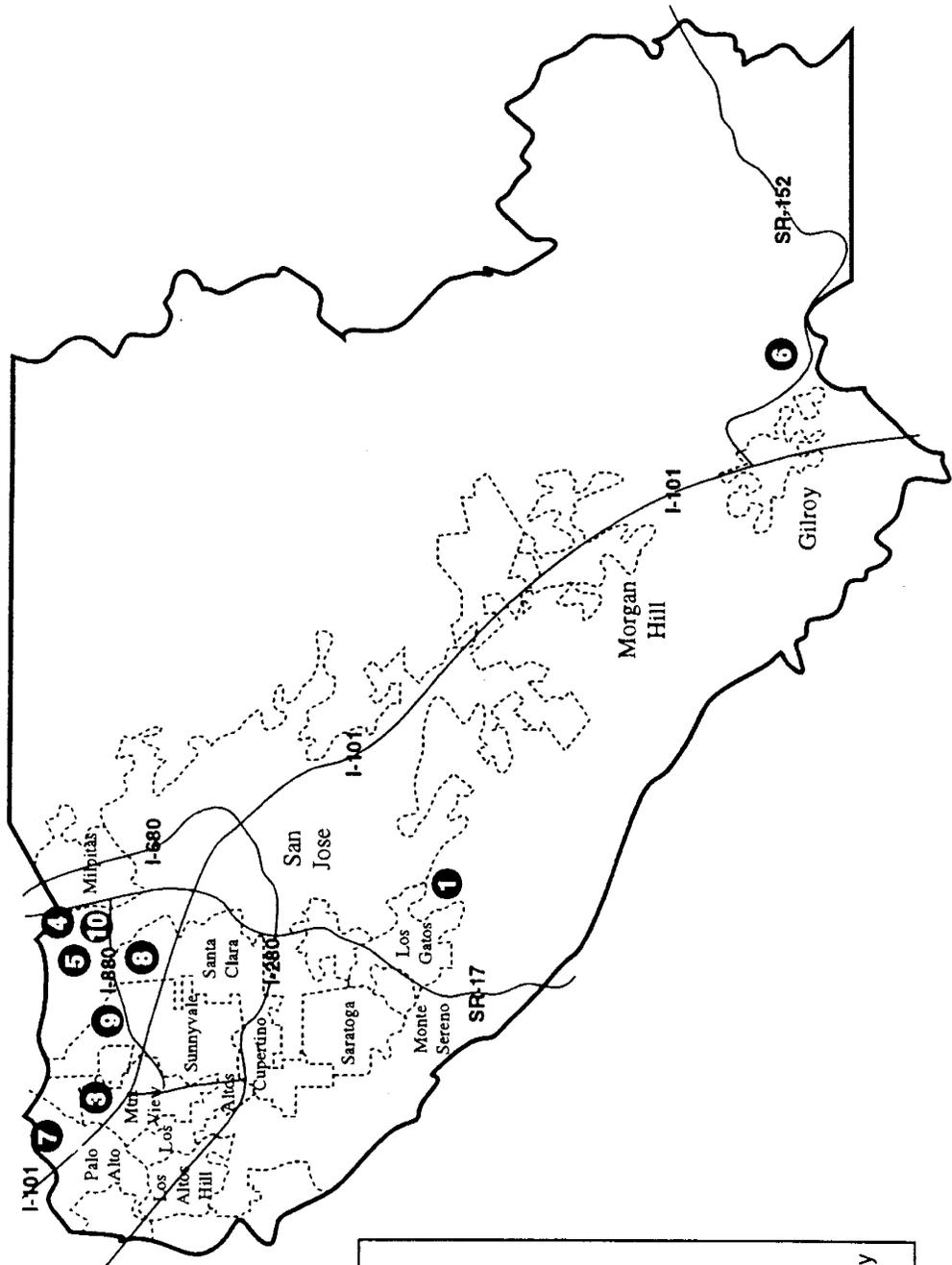


District	Collector
1	Waste Management of Santa Clara County
2	South Valley Refuse Disposal Company
3	Green Valley Refuse Disposal Company
3a	Lexington Hills Disposal Company
4	Green Valley Refuse Disposal Company
5	Los Altos Garbage Co. (LAGCO)
6	Peninsula Sanitary Services (Stanford Area)

 **NORTH**
NO SCALE

Sources: Santa Clara County Planning Office

Figure 5N-3 Landfill Locations



LEGEND

- 1 Guadalupe
- 2 Kirby Canyon
- 3 Mountain View
- 4 Newby Island
- 5 Owens-Corning
- 6 Pacheco Pass
- 7 Palo Alto
- 8 Santa Clara
- 9 Sunnyvale
- 10 Zanker Road
- Incorporated City Boundaries

 NORTH
NO SCALE

Sources: Santa Clara County Waste Management Plan

Planning Analysis & Development

According to a North County Solid Waste Management study, mixed paper and corrugated cardboard account for over 50% of their service area's total waste stream.²⁰ Drop-off recycling programs have existed in Santa Clara County since 1971. The first curbside recycling collection programs in the County began in 1982, in the cities of Los Altos and Sunnyvale. Since that time, other cities have begun to offer curbside programs. By 1990, 13 of the 15 cities in the County were operating curbside programs, extending this service to 95% of County residents. Current recycling rates by local jurisdictions range from 2% to 25% of the waste stream.

Three transfer stations also serve as points of collection and separation of recyclable materials: the San Martin, San Jose Transfer Stations and the Recyclery, a Sunnyvale materials recovery and transfer station that opened in 1991. The Recyclery is a state-of-the-art facility, designed for a maximum capacity of 1,000 tons per day. It is expected to increase significantly the amount of commercial and industrial waste recycling countywide.

Draft 1994 General Plan Strategies

The Countywide Issues & Policies Chapter contains strategies for solid waste management related to:

Strategy 1: Source reduction and reuse

Strategy 2: Recycling and composting

Strategy 3: Transformation

Strategy 4: Landfilling

Policies and Regulations

A. Plans Policies that Foster Environmental Protection

Policies from the 1980 General Plan

Solid waste collection and recycling services shall be provided to all County residents, and services to commercial and industrial establishments expanded wherever feasible. [Policy C-RC 66]

Substantive Policy Changes in the Draft 1994 General Plan

Santa Clara County shall strive to reduce landfilled wastes and achieve or surpass requirements mandated by state law (i.e., 25% reduction by 1995, 50% reduction by 2000). [Policy C-RC 62] Santa Clara County shall seek innovative and effective means of achieving source reduction

and reuse as part of its overall strategy to reduce waste generation and landfill demand. [Policy C-RC 65] Neighborhood and community composting centers should be encouraged and developed to reduce yard waste. [Policy C-RC 69] Decisions to site new landfills or expand existing ones should balance the need for such facilities with the full range of environmental issues involved. [Policy C-RC 71] Expansion of landfills should be encouraged in preference to siting new facilities. [Policy C-RC 73] New landfills, if necessary, shall not be located in baylands or other environmentally sensitive areas. [Policy C-RC 74]

B. Ordinances and Regulations that Reduce Impacts

Regulatory Agencies. Solid waste management regulations are enforced by a state regulatory framework that includes the following agencies:

- California Integrated Waste Management Board
- State Department of Conservation
- State Department of Health Services (DHS)
- State Air Resources Board
- Regional Water Quality Control Boards (RWQCBs)
- Air Quality Management Districts
- Local Land Use Authorities - Local Planning Agencies
- Local Enforcement Agencies (LEAs)
- County Health Departments

Title 14 of the California Code of Regulations and Title 7.3 of the California Government Code establish minimum standards for the handling and disposal of solid wastes as a means of promoting the health, safety, and welfare of California citizens. One of the major goals of solid waste landfill enforcement efforts is maintenance of ground water quality. Standards are to be enforced by Local Enforcement Agencies (LEA) who are appointed by local governing bodies.²⁰

The Santa Clara County Health Department acts as sole LEA for all unincorporated areas and cities in the county, except San Jose. The County LEA issues Solid Waste Facility Permits for operation of disposal facilities and sets health related standards countywide. It also assures standards will be coordinated among federal, state, and local agencies and private parties.²¹ The County neither owns nor operates any waste facilities and has no direct role in facility development or management. LEAs can finance enforcement through a fee system. The fee is established at \$0.16/ton in all of Santa Clara County. The approximately \$300,000 initial annual revenue supports a comprehensive enforcement and education program.²²

The Integrated Waste Management Act of 1989 (AB 939). The Integrated Waste Management Act, which became law in January 1990, shifted the statewide planning focus from development of landfill capacity to development of alternatives to landfill disposal.²³ The act requires local

plans be prepared and implemented, meeting solid waste disposal reduction goals and timetables within each municipality. It requires that each city meet a 25% waste stream reduction goal by 1995 and a 50% reduction by the year 2000.²⁴ The Act introduced an "Integrated Waste Management Hierarchy" of strategies (in descending order):

- Source reduction, to reduce the generation of wastes;
- Recycling and composing of materials;
- Transformation of wastes, e.g., through waste-to-energy processes; and
- Landfilling, as a last resort, for management of remaining material.²⁵

In accordance with AB 939, the County prepared a draft Unincorporated Area Source Reduction and Recycling Element and a draft Unincorporated Area Household Hazardous Waste Element in March 1994. The draft Source Reduction and Recycling Element outlines approaches to reducing solid waste at its source and for promoting recycling, composing, and public education and information programs. The Draft Household Hazardous Waste Element evaluates alternatives for managing household hazardous waste.

AB 939 also requires the County to adopt a countywide Integrated Waste Management Plan (CoIWMP) by 1996. The CoIWMP will replace the Santa Clara County Solid Waste Management Plan, which was originally prepared to comply with the California Solid Waste Management and Resources Recovery Act of 1972, and was substantially revised in 1989.²⁶

C. **Significance Criteria**

The CEQA Guidelines do not contain specific criteria for solid waste.

Impact 1. Solid Waste Collection and Disposal. The 1989 revised County Solid Waste Management Plan states that between 24 and 32 years of remaining refuse capacity exist. As growth under the area would occur at a rate similar to the past 14 years, it is anticipated that the rates of solid waste increases would be no greater than in the past and possibly less due to source reduction and recycling. Current figures show that the countywide average for waste amounts to approximately 1.2 tons/household/year.²⁷ The 400 dwelling units on new parcels projected under the Draft General Plan would thus generate 480 tons/household/year, assuming little or no recycling. As employment is expected to decline between 1990 and 2010 in the rural unincorporated area and because agriculture is not expected to expand these nonresidential land uses are not expected to cause a significant increase in the solid waste stream. Given the many Draft General Plan policies that address solid waste and the availability of 24-32 year landfill capacity, *the Draft General Plan is not expected to generate a significant impact on solid waste disposal facilities.*

Mitigation Measure: No further mitigation is required.

Impact 2. Cumulative Solid Waste Impacts. Cumulative development in the rural unincorporated area is expected to increase by 2,800 households. Assuming a solid waste generation rate of 1.2 tons/household/year, 3,360 tons would be generated annually over the life of the general plan. This would be 3.6% of the 93,000 tons per year generated in the rural unincorporated area. There is capacity available to handle this waste stream. Nonetheless, the Draft General Plan recommends policies to reduce this amount. *Cumulative development in the rural unincorporated area is not anticipated to result in a significant cumulative impact on solid waste disposal.*

Mitigation Measure: No further mitigation is required.

PARKS AND RECREATION

Environmental Setting

County Regional Park System: The Santa Clara County Parks Department has established 31 separate regional parks encompassing over 38,000 acres to serve countywide recreational needs (see Figure 3-3 in the Project Description Chapter). Hillside and mountain parks, water-oriented parks around reservoirs, streamside preserves, and multi-use trail corridors have all been integrated into the County's regional park system.

The past two decades have seen significant growth in the County's regional park system. In 1972, voters approved Measure C, the first of four County Parks Charter amendments that earmarked a portion of property tax revenues for acquisition, development, and maintenance of the County's regional park system. These funds, together with state and federal grants, have enabled the County to add 24,000 acres of land to its park system since 1972.²⁸

Midpeninsula Regional Open Space District²⁹: The Midpeninsula Regional Open Space District (MROSD) boundaries encompass the area from Woodside in San Mateo County southward to the Sierra Azul Preserve east of Lexington Reservoir in Santa Clara County. The purpose of the MROSD is to acquire and preserve large areas of open space lands in the Santa Cruz Mountains and along the Bay. These lands provide open space for a variety of purposes including low-intensity recreation, wildlife habitat, native vegetation preservation, urban form guidance, scenic resource protection and public health and safety protection by preventing development in hazardous areas. MROSD has acquired fee title to 35,224 acres of land and conservation or trail easements on 2,306 acres of land; 18,592 acres of these lands are in Santa Clara County.

Henry Coe Memorial State Park: Henry Coe State Park, the second largest state park in the state and the only state park in the county, is located in the Diablo Range east of Morgan Hill. The park encompasses over 68,000 acres: approximately 36,000 in Santa Clara County and approximately 32,000 acres in neighboring Stanislaus County. An additional 11,000 acres are expected to be added to the park by early 1994. Henry Coe State Park contains one of the most varied landscapes in the County and is noted for its diverse wildlife. The master plan land use policies favor low-intensity recreational activities so as to minimize human impacts on this pristine environment.

San Francisco Bay National Wildlife Refuge: The San Francisco Bay National Wildlife refuge, which is managed by the U.S. Fish and Wildlife Service, consists of approximately 18,000 acres of wetlands, salt ponds, and mudflats along the perimeter of San Francisco Bay. The rich estuarine habitat of the refuge provides resting and feeding areas for many species of birds, spawning grounds for fish, and shelter for millions of micro-organisms. About 3,700 of these acres are in Santa Clara County.

U.S. Bureau of Land Management (BLM) Holdings: The largest amount of federally owned open space lands in the County consist of the 7,600 acres managed by the Bureau of Land Management (BLM). The great majority of these holdings are located in the Diablo Range directly north of Henry Coe State Park. Other areas of the County containing scattered BLM holdings include the Santa Cruz Mountains south of Mount Loma Prieta and the Diablo Range near Pacheco Pass. The primary use of these lands is to provide range for cattle. However, the BLM does encourage a multiple-use policy on its rangelands involving low-level recreation.

Other Public and Private Park and Open Space Lands: City parks with regionally significant open space and recreational areas include Alum Rock Park (700 acres), Palo Alto Baylands (1,800 acres), and Foothill and Arastadero Parks (over 2,000 acres combined). In addition to lands owned and managed by special districts and county, state, federal governments, there are many other public and private lands in Santa Clara County that are not open for recreational use by the public, but do make important contributions as buffer zones, watershed lands, and wildlife habitat. These lands include the City of San Francisco Watershed lands (14,000 acres), UC/Lick Observatory lands (3,300 acres), San Jose Water Company lands (6,400 acres), Stanford University-Academic Reserve/Open Space (3,900 acres), Novitiate of Los Gatos lands (1,300 acres), Leslie Salt Company lands (8,000 acres), Kaiser Permanente Quarry lands (3,600 acres), UTC lands(5,000 acres), and IBM lands (900 acres).

Each entity described above is responsible for acquiring and managing its own separate landholdings. In order to address open space preservation for the entire county, the County Board of Supervisors established the Preservation 2020 Task Force to recommend long-term strategies for protection of open space, hillside areas and parklands in the County outside of the cities' urban service areas. The task force issued a report entitled *Open Space Preservation: A Program for Santa Clara County* in 1987.

One of the most important recommendations from this report was the formation of the Santa Clara County Open Space Authority. The authority was created on February 1, 1993, and covers the cities of Milpitas, Santa Clara, San Jose, Campbell, and Morgan Hill, as well as the unincorporated area adjacent to these cities. The authority's priority for the acquisition of open space will be focused on lands closest, most accessible, and most visible to these urban areas. The authority recently voted to set up an assessment district for acquisition funding.

Proposed Trail and Bikeway Corridors: As part of the region-wide planning process for a series of trails circling San Francisco Bay, efforts are underway to plan a network of ridge trails through Santa Clara County. The County Board of Supervisors has appointed a 16-member committee that is in the process of preparing the County Trails Master Plan Update. Once this planning process is complete, the County Trails Master Plan Update will be adopted as an amendment to the Santa Clara County General Plan. Environmental review of the Trails Master Plan Update will be conducted separately from the environmental review of the Draft 1994 General Plan. In addition to addressing the regional trail system, the County Trails Master Plan Update will also coordinate plans for County bikeways, which are addressed in the Santa Clara County Transportation Plan T2010 (see Chapter 5D, Transportation).³⁰

The City of San Jose has recently completed its Transportation Bicycle Plan, which sets forth a plan for an integrated city bikeway network that would connect to the countywide bikeway system. The plan establishes a primary bikeway network for short local trips and longer distance regional trips; a secondary network connecting major neighborhoods to the primary network; and a local network connecting neighborhoods to the primary and secondary networks. The plan reviews bikeway connections for seven subareas in the city.³¹

Draft 1994 General Plan Strategies

The Rural Unincorporated Parks and Recreation Chapter contain strategies for:

- Strategy 1: Developing parks and open space lands.*
- Strategy 2: Improving accessibility.*
- Strategy 3: Balancing recreation and environmental objectives.*
- Strategy 4: Facilitating interjurisdictional coordination.*
- Strategy 5: Encouraging private sector and non-profit involvement.*

Policies and Regulations

A. Plan Policies that Foster Environmental Protection

Policies from the 1980 General Plan

Sufficient land should be acquired and held in public domain to satisfy the recreation needs of current and future residents. [Policy R-PR 2] Access to regional parks should be improved through transit, trail linkages, facilities for the physically-challenged, and additional parking. [Policies R-PR 7 & 8] Parks and recreation facilities should be compatible with the resources and carrying capacity of each site. [Policy R-PR 10] Parks and trails in remote areas, fire hazard areas, and areas with inadequate access in general should include necessary improvements to ensure public safety and avoid possible environmental impacts. [Policy R-PR 12]

Substantive Policy Changes in the Draft 1994 General Plan

The system of public open space lands should visually and environmentally preserve significant resources and recreational and opportunities compatible with each site's natural resources. [Policy R-PR 4]

B. Ordinances and Regulations that Reduce Impacts

There are no planning based ordinances for parks and recreation.

C. Significance Criteria

The CEQA Guidelines, *Supplementary Document G (w)*, states that a project will normally have a significant effect on the environment if it will *conflict with established recreational uses of the area*.

Impact 1. Parks and Recreation. Implementation of the Draft 1994 General Plan and the resultant growth by the year 2010 would result in an additional population of about 1,172 from new residential parcels. These residents would utilize the various park, recreation, and open space facilities provided throughout the County. Staff at the County Parks System indicate that adequate lands are available for future park expansion acquisition. The problem remains of having enough and/or adequate facilities (e.g., ball fields, etc.) within the parks to serve the population. Additionally, when urban development occurs in areas that are near established parks, this often drives the land prices up, making purchasing more land for park expansion too expensive.³²

The Draft 1994 General Plan policies which address park and recreation issues are noted above. Policy R-PR 4 states that the public open space land system should preserve visually and environmentally significant open space resources and provide for recreation activities compatible with the enjoyment and preservation of each site's natural resources. Policy R-PR 7 states that opportunities for access to regional parks and public open space lands via public transit, hiking, bicycling, and equestrian trails should be provided. Policy R-PR 10 states that recreation facilities and activities within regional parks and public open space lands should be located and designed to be compatible with the long-term sustainability of each site's natural and cultural resources. *Due to the small amount of growth attributable to the Draft 1994 General Plan, no significant impacts are expected on the MROSD, Henry Coe Memorial State Park, San Francisco Bay National Wildlife Refuge, other public and private parks and open space, or proposed trail and bikeway corridors.*

Mitigation Measure: No further mitigation is required.

Impact 2. Cumulative Impacts. Cumulative development in the unincorporated areas would increase the County unincorporated population by 8,207 people. To some extent this growth may seek access to facilities within the parks which are presently over-utilized in some areas, *cumulative development could have a significant impact on parks facilities.*

Mitigation Measure 1: The County parks departments should monitor use of facilities in existing parks and consult with appropriate planning departments to determine how this correlates with cumulative residential development. If facilities are found to be over utilized because of growth, future development should be required to implement recommendations of the relevant park master plans with regard to provisions for land, facilities and/or park fees. [Responsibility: Cities, County and Parks Departments.]

Mitigation Measure 2: The various Parks Departments should encourage use of less utilized parks in the County.

These measures would reduce the impact to a level of insignificance. [Responsibility Parks Department].

HEALTH AND EMERGENCY SERVICES

Environmental Setting

Medical and Hospital Services: Santa Clara County has a total of 12 public and private hospitals. The County owns and operates the Valley Medical Center (VMC), located near the I-280/Bascom Avenue interchange. VMC is the only publicly operated facility in the county. With 441 licensed acute beds, VMC provides a comprehensive range of inpatient services as well as many specialty care services. It is the busiest medical center in the county, with approximately 1,000 patient visits per day and a staff of 3,000.³³ VMC also operates three satellite clinics in the eastern, central, and southern parts of the county.

Specialized facilities at the medical center include the trauma unit, the Regional Burn Center, the Regional Spinal Cord and Head Injury Center, and the Level III Neonatal Intensive Care Unit. Other services include a Pediatric Rehabilitation Unit, the Regional Poison Information Center, a Regional High-Risk Pregnancy Program, and a Child Protection Center for treatment of sexually or physically abused children. VMC is served by the Life Flight helicopter transport program, and a paramedic base station is located in the facility.

As well as insured patients, VMC serves County residents who are uninsured or are unable to pay for their own health care. With soaring medical costs, this group increasingly includes full-time workers with no health insurance as well as indigent people. Over 90% of the uninsured in the County are cared for at VMC. Patients seen at VMC tend to be more acutely ill than those served at other hospital facilities in the County. Because of poverty and lack of insurance, many patients delay seeking health care and, thus, have more serious problems by the time they arrive at VMC. Private patients referred to the VMC facilities tend to be critically ill and in need of the highest level of care.

Rising health care costs and the increasing numbers of patients with critical health problems such as AIDS are severely burdening the County's resources. The state has eliminated the requirement that counties provide medical services, but the need for these services remains and is increasing.

Emergency Services: The County's Emergency Services Department (ESD) is responsible for coordinating and planning for disaster response. The County has a state-of-the-art Emergency Operations Center (EOC), which encompasses approximately 3,500 square feet and has 74 computer work stations. It serves as the agency coordination center during times of disaster. As indicated by law, all public employees are designated as disaster workers in times of disaster. For Santa Clara County as a whole, this amounts to approximately 15,000 persons.³⁴

In times of disaster, the goal of the ESD is to establish crisis management and return to "business as usual" as quickly as possible. The "life safety" service objective is broken down into three key components: 1) prevent further loss of life (usually accomplished within first two days of disaster); 2) restore essential services (accomplished within 1-2 weeks or up to one month, depending on the severity of the event); and, 3) restore the community to a pre-disaster state of normalcy (can take up to 20-30 years).³⁵

Environmental Health Services: Department of Environmental Health (DEH), a part of the County Environmental Resources Agency, provides a variety of public health and consumer protection tasks. DEH includes the Office of Consumer Protection, Office of Toxics Enforcement, and the Vector Control District.

In the area of solid waste, DEH tasks include oversight and permitting of solid waste haulers, garbage trucks, septic tank pumpers, grease haulers, and handlers of infectious waste. The office is involved in the siting and permitting of landfills, and also handles household hazardous wastes (see "Solid Waste Collection and Disposal" section and the Hazardous Substances chapter of this EIR).

Public health tasks include inspection of retail and wholesale food facilities, catering operations, vehicles serving food (catering trucks, hot dog carts, ice cream trucks), fairs, festivals, and vending machines. DEH also inspects public pools and spas in schools, health clubs, apartments, condominiums, parks, and hospitals.

DEH is involved in the development process in the County in that it inspects and ensures proper placement of septic systems, private water supplies, and small water systems. This office also continues long-term inspection and monitoring of these types of facilities. Related to the development process is this office's oversight of underground tanks, hazardous waste generators, and hazardous waste storage sites. Noise monitoring and abatement also fall under the responsibilities of this office.

Vector control responsibilities include programs to control or eliminate disease carrying organisms such as rats, mosquitos, flies, ticks, and fleas. Other programs managed by DEH include inspection of animal establishments, housing, and detention facilities, and handling of dangerous animals.

Draft 1994 General Plan Strategies

The Countywide Health and Safety Chapter contains the following strategies for health and safety facilities planning:

Strategy 1: Plan for necessary health and safety facilities.

Strategy 2: Monitor and maintain adequate existing facilities.

There are two Countywide strategies for emergency preparedness:

Strategy 1: Plan for immediate disaster response.

Strategy 2: Plan for post-disaster recovery.

Policies and Regulations

A. Plan Policies that Foster Environmental Protection

Policies from the 1980 General Plan

There are no health and safety policies transferred to the Draft 1994 General Plan from the 1980 General Plan.

Substantive Policy Changes in the Draft 1994 General Plan

The health and safety of the general public should be ensured by the County and cities responsible for such services through provision of facilities adequate to future demand. [Policy C-HS 40] A countywide Community Health Care Master Plan should be developed to facilitate coordinated health facilities planning and monitoring. [Policy C-HS(i) 36] Local governments should comply with all federal and state regulations regarding emergency planning and preparedness. [Policy C-HS-17] Local government, business, and community organizations should cooperate in preparing the most effective emergency response plans and procedures feasible. [Policy C-HS-18] The County and cities should comply with federal and state hazardous materials regulations and planning activities. [Policy C-HS-19] All proposals to site a hazardous waste facility shall be compatible with neighboring land uses and be consistent with the permitting jurisdictions's General Plan and the Countywide Hazardous Waste Management Plan. [Policy C-HS-20] Local emergency planning agencies should work to ensure continuity of government and a swift restoration of public and commercial services after a disaster. [Policy C-HS-21] Ensure that critical emergency services and equipment normally provided by outside agencies will be available in each jurisdiction to the extent possible (i.e., public health, mental health, coroner, fire suppression, etc.). [Policy C-HS-22] Local governments and hazardous materials users should work jointly to identify the most effective and economically feasible measures to prevent hazardous materials incidents and ensure the swift post-incident recovery of all effected. [Policy C-HS-23]

B. Ordinances and Regulations that Reduce Impacts

There are no planning ordinances that apply to the health and emergency services. The reader is referred to Hazardous Substances Chapter 5I of this EIR for a discussion of ordinances and regulations related to that topic.

C. Significance Criteria

The CEQA Guidelines, *Supplementary Document G (v) and (z)*, indicates that a project will normally have a significant effect on the environment if it will *create a potential public health hazard or involve the use, production or disposal of materials which pose a hazard to people or animal or plant populations in the area affected; or interfere with emergency response plans or emergency evacuation plans.*

Impacts and Mitigations

Impact 1. Medical and Hospital Services. Despite population increase in the County, inpatient utilization of hospital beds decreased by 20% in the 1980's, primarily because the average length of stay decreased at most hospitals in the County³⁶. As indicated in the Existing Setting section, however, soaring health costs and increasing numbers of patients with critical health problems are severely burdening the County's resources.

The VMC's modernization project would replace an existing 150,000 square foot building (which is seismically unfit) with a new 300,000 square foot building. Allowing for changes in code requirements, approximately 200,000 to 210,000 square feet of the new building would be utilized to replace existing facilities. This would leave up to 100,000 square feet available for expansion.

Policy C-HS 40 of the Draft 1994 General Plan Health & Safety Chapter specifies that the health and safety of all County residents should be ensured by the County and cities through the provision of the health care and public safety facilities necessary to support existing and projected demand. Additionally, implementation recommendations C-HS(i) 36-37 specify development of a Countywide Community Health Care Plan, and identification and integration of community health care and public safety facilities into the land use plans of each city and the County.

Growth projections provided for in the Draft 1994 General Plan would result in up to 400 single-family lots being developed, with a resulting population of approximately 1,172 persons. The proportion of these residents expected to

utilize the VMC facility *is not anticipated to result in a significant impact to services due to the planned expansion of facilities.*

Mitigation Measure: No further mitigation is required.

Impact 2. Emergency Services. When disasters or emergencies of a great magnitude occur, the ESD is asked to assess the situation, evaluate resources and prioritize their use. It is difficult to quantify what impact growth projections under the Draft 1994 General Plan would have on ESD services in that it is impossible to predict where a disaster might take place and what percentage of the population would be involved. The ESD is in contact with all County agencies and is constantly updating their preparedness based upon changes in demographics of the County. In the past the ESD provided public education campaigns to make residents aware of emergency response plans. However, due to funding cutbacks, this practice has been curtailed in the last three years. In its place, local phone books supply this information for residents. *The growth projected for in the Draft 1994 General Plan is not anticipated to result in a significant impact to disaster response.*

Mitigation Measure: No further mitigation is required.

Impact 3. Cumulative Impacts on Environmental Health (DEH). Growth projections for cumulative development would result in a population increase of approximately 8,207 persons. This additional population would impact health and safety services in the form of demand for additional services. The growth would occur over a 15-year period, allowing for the opportunity to gradually increase services as needed. Due to the policies discussed above, and the unincorporated areas' small contribution, *cumulative development is not expected to have a significant impact on health services.*

Mitigation Measure: No further mitigation is required.

Endnotes to Public Services Chapter

1. Telephone conversation with Dan Attwell, SCCCFPD, August 17, 1994.
2. Telephone conversation with Don Collins, CDF, August 16, 1994.

3. Ibid.
4. Ibid.
5. Hugh Graham, Santa Clara County Planning Office.
6. Written communication from Steven T. Cushing, Lieutenant, Support Services/Personnel & Training, County of Santa Clara, Office of the Sheriff, May 17, 1994.
7. Ibid.
8. County of Santa Clara Department of Planning and Development, Alternative Futures: Trends & Choices (Report of Santa Clara Strategic Vision Steering Committee), October 1990, pages 75-78.
9. Hugh Graham, Santa Clara County Planning Office.
10. Building permits issued in the unincorporated area have typically comprised less than 5% of the countywide totals in any one year, based on County records (various INFO issues, Santa Clara County Planning Office, various dates). However, development in unincorporated areas within the Los Gatos, Gilroy, and Morgan Hill school districts has exceeded 5% of the incorporated development in any one year.
11. Building Permits, 1980-92, Santa Clara County unincorporated area, 9/15/93.
12. It is important to note that building permits are mainly issued on existing vacant lots and would be issued regardless of the development density allowed by a General Plan. For this reason, subdivision activity is the key indicator of a General Plan's effect on growth within school districts. For the 1980-1993 period, a total of 324 net new parcels were created throughout the unincorporated County based on County records Santa Clara County Planning Office, June 14, 1994. It can be estimated that about 136 parcels, or 10 parcels per year, have been created in the Gilroy and Morgan Hill school districts, assuming a geographic distribution similar to that of building permits.
13. Gilroy Unified School District, 1992.
14. Telephone conversation with Mike Mormon, Morgan Hill USD, August 10, 1994.
15. Telephone conversation with Mike Brand, Los Gatos USD, August 10, 1994.
16. Letter from Santa Clara County Planning Office regarding Masten Avenue RV Park, AFEIR, dated March 11, 1994.

17. County of Santa Clara, Unincorporated Area Source Reduction and Recycling Element, Disposal Facility Capacity Component, pages VIII-1 through VIII-2.
18. Ibid.
19. Ibid.
20. Santa Clara County Department of Planning and Development, Solid Waste Management Plan for Santa Clara County (Report of the Office of Toxics and Solid Waste Management, 1989 Plan Revision, May 1990), page VI-2.
20. Solid Waste, op. cit., page VIII-1.
21. Solid Waste, op. cit., page VIII-3.
22. Solid Waste, op. cit., page VIII-5.
23. Solid Waste, op. cit., page I-2.
24. Solid Waste, op. cit., page I-3.
25. Ibid.
26. Telephone conversation with Mike Perry, County of Santa Clara Environmental Resources Agency, Integrated Waste Management Program, May 23, 1994.
27. Telephone conversation with Margaret Rands, Program Manager, Santa Clara County Environmental Resources Agency, Solid Waste Division.
28. County of Santa Clara Department of Planning and Development, Alternative Futures: Trends & Choices (Report of Santa Clara Strategic Vision Steering Committee.), October 1990, Page 57.
29. County of Santa Clara Department of Planning and Development, op. cit., Page 58.
30. Telephone conversation with Julie Bondurant, Santa Clara County Parks and Recreation Department, May 20, 1994.
31. City of San Jose, Department of Streets and Traffic, Final Report, Transportation Bicycle Plan, Prepared by Wilbur Smith Associates and Transmetrics, June 21, 1993.
32. Telephone conversation with Dave Pierce, Regional Park Planner, Santa Clara County Parks Department, August 15, 1994.

CHAPTER 5N: *Public Services*

33. Santa Clara Valley Medical Center, A Critical Resource for the Whole Community (undated).
34. Telephone conversation with Bob Fields, Manager of Emergency Services for Santa Clara County, August 18, 1994.
35. Ibid.
36. Santa Clara County Planning Office, VMC Modernization Project DEIR, September 1993, Page 9.

CHAPTER 50

ENERGY CONSERVATION

Environmental Setting

Pacific Gas and Electric Company (PG&E) supplies electricity and natural gas service to Santa Clara County. PG&E's service covers 94,000 square miles in northern and central California, includes 48 of California's 58 counties, and serves a population of 12.8 million people.¹ PG&E generally expects to be able to provide electricity and natural gas service to new development in Santa Clara County. In some cases, developers are required to pay fees for extension of services to undeveloped areas.²

Electricity

PG&E supplied about 62 billion kilowatt-hours (kWh) of electricity in 1986.³ Residential and commercial customers each represented about 34% of PG&E's total electrical sales. Other uses included industrial consumption (approximately 26%), agricultural consumption (4%), sales to other electrical utilities (1%), and public street and highway lighting (1%). The peak 1986 electrical demand for the PG&E service area occurred on August 4 and was 15,439,000 kilowatts (kW). PG&E was able to meet this peak demand with a 17.4% reserve margin (the amount of available capacity over peak demand).⁴

Electrical power is produced by a diverse generating system that includes hydroelectric, nuclear, fossil fuel, geothermal, cogeneration, wind, biomass, and solar facilities. PG&E produces most of its power through the burning of fossil fuels (about 20%) and hydroelectric facilities (also about 20%). Nuclear power plants provide about 16% of PG&E's electricity; geothermal provides about 12%. About 10% is provided by other sources (e.g., solar, wind energy, biomass conversion) and about 2% is purchased out-of-state.⁵

PG&E is required by federal law to sign contracts and purchase all power produced by small generators in its service area. The California Public Utilities Commission (PUC) determines which of these generators are "Qualifying Facilities," and sets the price PG&E must pay for the power generated.⁶

PG&E does not expect to require any additional large central station electric power plants in the near term, in light of the capacity provided by the recent addition of the Helms Pumped Storage Project and the Diablo Canyon Nuclear Power Plant, and small "alternative" energy projects built by independent producers.⁷ PG&E-constructed projects expected to come on line by 1995 include about 335,000 kW of power from three new geothermal units at The Geysers, 166,000 kW of additional hydroelectric power, and a possible 326,000 kW of purchased power from

PG&E's participation in the building of a 1.6-million kW transmission line from the Pacific Northwest to California. PG&E forecasts a need for added capacity in the late 1990's, for which no specific projects are yet planned.⁸

PG&E owns and maintains transmission and distribution lines throughout Santa Clara County. A primary 500 kV transmission line traverses Santa Clara County from northeast to southwest. Electrical power is distributed throughout the County from this transmission line via a substation near U.S. 101 in Coyote. Transmission lines of 230 kV, 115 kV, and 60 kV carry power to distribution stations or large individual customers. Smaller lines (under 50 kV) emanate from the distribution substations to serve residential and commercial customers.⁹

Natural Gas

PG&E supplied approximately 406 billion cubic feet of natural gas to its customers in 1986. Approximately 47% of this was consumed by residential customers, 19% by commercial customers, 32% by industrial customers, and about 2% was sold to other utilities. PG&E's peak-day for natural gas in 1986 was 3,107 million cubic feet. Canadian sources provided approximately 42% of PG&E's 1986 gas requirements, while southwestern U.S. sources supplied 34%, and California sources supplied 24%.¹⁰

Natural gas service to the County is provided via three transmission mains near the alignment of Interstate 880 (the Nimitz Freeway) in Milpitas. Gas from these transmission mains is distributed throughout the County from a gas regulating station near Calaveras Road and the Nimitz Freeway in Milpitas.¹¹

Energy Use in the County

Santa Clara County is known throughout the state as a center for high technology and computer industries. The County has several large urban cities in the northern portion of the County, but the majority is suburban, automobile dependent and its industries (mainly in the urban areas) are known to generate a high demand for energy. The high technology industries in the County consume more gas and electricity than other types of industries. The South portion of the County is involved in agricultural uses, is more sparsely populated and has lower energy demands.

Of the total energy consumed statewide, about half is utilized for transportation purposes. This is true in Santa Clara County, as well. The continued increase in vehicle miles traveled as well as population increases projected for the County as a whole, generate the need for local strategies to increase fuel efficiency and decrease auto dependency.

Energy Regulations and Plans

The energy consumption by new buildings in California is regulated by the State Building Energy Efficiency Standards, embodied in Title 24 of the California Code of Regulations.¹² The efficiency standards apply to new construction of both residential and non-residential buildings, and regulate energy consumed for space heating, cooling, ventilating, water heating, and lighting. The building efficiency standards are enforced by the local building permit process.

According to the 1992-93 California Energy Plan, the population of the state will reach 40 million by 2005, and energy demand will increase on average 2% per year for the next twenty years, through 2013. The state plan for energy efficiency focuses on three major areas:

- continued investment in and reliance upon efficiency to meet most of the increased need;
- increased diversification of supply to minimize risk; and
- accounting for air quality impacts and energy costs.

The state strategy also calls for energy efficiency in transportation. It involves reducing vehicle miles travelled, shifting to alternative fuels and modes of travel, and increasing fuel efficiency standards for vehicles sold in the state. The Santa Clara County Draft 1994 General Plan supports the state energy plan with policies which further these goals.

Draft 1994 General Plan Strategies

The Draft 1994 General Plan notes the interdependency among energy conservation, transportation demand management and air quality. It notes that statewide, nearly half the energy consumed is for transportation and that transportation is almost 100% dependent on petroleum. Use of petroleum fuels is responsible for most air pollution because when burned it generates hydrocarbons and ozone precursors. While technological improvements in automobile fuel burning efficiency and the advent of alternative fuels will improve air quality and reduce fossil fuel consumption, the Plan notes the tools available to planners to further achieve energy conservation goals. These include sound land use planning, growth management, transportation system planning and housing policy. For example, land use policies that reduce the need to drive and balance housing choices with job location will tend to reduce energy consumption.

The 1994 Draft General Plan also notes energy conservation achievements regarding domestic heating and industrial processes. Energy-efficient building design, including insulation, solar siting and low energy consuming equipment and appliances contribute to conservation goals.

The Countywide Resource Conservation chapter contains strategies for energy conservation:

Strategy 1: Reducing transportation energy demand and oil-dependency.

Strategy 2: Conserving energy in residential, commercial, agricultural and industrial sectors.

Strategy 3: Increasing consumer and general public education.

The Rural Unincorporated Resource Conservation chapter of the Draft 1994 General Plan does not contain any strategies addressing energy resources.

Policies and Regulations

A. Plan Policies that Foster Environmental Protection

Policies from the 1980 General Plan

The energy conservation policies in the 1980 General Plan retained in the Draft 1994 General Plan relate to energy use in the transportation sector as well as the industrial and residential sectors of the County. The policies are intended to encourage energy conservation and decrease dependency on fossil fuels through such measures as compact urban development, transportation demand management (TDM), and energy conserving building construction for residential, industrial, and agricultural operations [C-RC 78; C-RC 80-82].

Substantive Policy Changes in the Draft 1994 General Plan

Additional energy-related policies in the Draft 1994 Plan emphasize inter-related goals for reducing energy demands in the transportation sector (which also benefits air quality and traffic congestion, [C-RC 79]) as well as improving public awareness of the continuing need to reduce energy consumption [C-RC 83].

B. Ordinances and Regulations that Reduce Impacts

Both the Subdivision Ordinance and the Architectural and Site Approval Ordinance include requirements for solar use and energy efficiency in buildings.

C. Significance Criteria

CEQA Guidelines *Supplementary Document G (n,o)*, a project would normally have a significant effect on the environment if it would *encourage activities that result in the use of large amounts of fuel or energy, or use fuel or energy in a wasteful manner*. There are no specific state or federal standards that indicate what is to be considered a "large amount" of fuel or energy.

Impacts and Mitigations

Impact 1. Increase in Operational Energy Consumption. The project would result in the consumption of additional energy due to increases in residential, industrial and commercial land uses in the unincorporated portions of the County. Future energy use would result from fuel consumed by transportation and domestic use of gas and electricity by future residents, industrial, and commercial facilities. Construction activities and mineral extraction (quarry operations) would require energy use for manufacturing, transportation of materials and site preparation.

The very low density of development allowed under the Plan for the rural areas tends to increase vehicle miles traveled and thus encourage consumption of fuels used in automobile travel. However, the increased number of urban and rural unincorporated area residents expected (about 8,207) by the year 2010, is not a substantial increase. The policies of the Plan relating to air quality, transportation and energy encourage the use of alternative transportation when possible, reduction of vehicle miles traveled, and alternative fuels in these rural unincorporated areas. The EIR on the T2010 Santa Clara County Transportation Plan finds no adverse transportation energy impacts are projected in Santa Clara County due in part to the increases in vehicle fuel efficiency¹³.

The small amount of commercial and industrial development allowed under the Plan in rural areas would not be expected to require substantial amounts of energy or exceed the capacity of the existing energy distribution structure. The Architectural and Site Approval Guidelines would support this by increasing the use of solar energy and encouraging energy efficient building construction.

The increase in operational energy (for transportation, industrial and residential use) would be a less than significant impact of the Draft 1994 General Plan.

Mitigation Measure : No further mitigation is required.

Impact 2. Cumulative Energy Demands. The increase in energy demands anticipated to occur as a result of the Draft 1994 General Plan would not be significant. The energy policies in the Plan especially those aimed at reducing transportation

energy and improving air quality [C-RC 78-79] and their implementation would mitigate the contribution to cumulative regional energy demands resulting from the Plan.

However, given the available alternative energy resources, designing residential, commercial and industrial property without utilizing them would be inconsistent with the County's strategy to conserve energy. Coordination with the Title 24, the Zoning Ordinance provisions and the Architectural and Site Approval requirements for energy efficiency would eliminate any inconsistencies.

Cumulative regional energy demand is a less than significant impact of the Draft 1994 General Plan.

Mitigation Measure: No further mitigation is required.

Endnotes to Energy Conservation Chapter

1. Pacific Gas and Electric Company, 1993 Annual Report.
2. Telephone conversation with Randy Kihara, PG&E, Santa Clara County, May 16, 1994.
3. County of Santa Clara Planning Department, Gas and Electric Utilities Plan, Public Services and Facilities Element of the General Plan of Santa Clara County, 1968 (revised 1981, 1985).
4. County of Santa Clara Planning Department, Gas and Electric Utilities Plan, Public Services and Facilities Element of the General Plan of Santa Clara County, 1968 (revised 1981, 1985).
5. County of Santa Clara Planning Department, Gas and Electric Utilities Plan, Public Services and Facilities Element of the General Plan of Santa Clara County, 1968 (revised 1981, 1985).
6. County of Santa Clara Planning Department, Gas and Electric Utilities Plan, Public Services and Facilities Element of the General Plan of Santa Clara County, 1968 (revised 1981, 1985).
7. Pacific Gas and Electric Company, Annual Report, 1986.

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8. County of Santa Clara Planning Department, Gas and Electric Utilities Plan, Public Services and Facilities Element of the General Plan of Santa Clara County, 1968 (revised 1981, 1985).
9. County of Santa Clara Planning Department, Gas and Electric Utilities Plan, Public Services and Facilities Element of the General Plan of Santa Clara County, 1968 (revised 1981, 1985).
10. County of Santa Clara Planning Department, Gas and Electric Utilities Plan, Public Services and Facilities Element of the General Plan of Santa Clara County, 1968 (revised 1981, 1985).
11. County of Santa Clara Planning Department, Gas and Electric Utilities Plan, Public Services and Facilities Element of the General Plan of Santa Clara County, 1968 (revised 1981, 1985).
12. California Energy Commission, 1981. California Code of Regulations, Title 24, Part 2, Chapter 2-53. Enforcement of Title 24 standards is addressed in the California Code of Regulations, Title 20, Chapter 2.
13. Santa Clara County Transit District, T2010 Final Environmental Impact Report, 1991, P. 124.

CHAPTER 5P CULTURAL AND HISTORIC RESOURCES

Environmental Setting

Santa Clara County enjoys a rich cultural heritage as evidenced by a proliferation of sites of historical and archaeological interest scattered throughout the County. The first recorded settlement of the Santa Clara Valley was by the Ohlone Indians about 250 A.D. The Ohlones were a non-agricultural society, dependent on the environment for food and basic necessities. In 1769, the Moncado Party of Spanish explorers discovered the Santa Clara Valley by accident, while searching for Monterey Bay. The initial Spanish settlements three years later were missions, presidios and pueblos, colonized "to save the souls of the Indians and to secure the territory against foreign intrusion." The mission lands were secularized in the early 1800's; large land holdings were granted to prominent Mexican families between 1810 and 1840. A few English speaking settlers came to the Valley, beginning about 1813; however, the first big wave of American pioneers (the Bidwell Party and the Stevens-Murphy-Townsend Party) did not arrive until the 1840's. Many archaeological sites in Santa Clara County are connected with the history of the Ohlone Indians. Native American burial sites and sacred sites are delicate resources because of their spiritual importance to Native American tribes still in the area.

Population in the Santa Clara Valley remained steady between 1844 and 1851, when discovery of gold in 1848 drew incoming pioneers to other parts of the state. In the meantime, families such as the Murphys took advantage of statehood, which ended the restriction of land ownership to Mexican citizens only; they began purchasing the Ranchos of the Castro, Hernandez, and Peralta families. Soon, Martin Murphy, Sr. owned most of the area between present-day Sunnyvale and Gilroy.

In 1864, the Central Railroad (now Southern Pacific) completed a line between San Francisco and San Jose. Several owners of large homesteads (including Martin Murphy's heirs) began selling five-and ten-acre parcels for small ranches. Weather and soil conditions were superb for fruit and viticulture, and agricultural enterprises in Santa Clara Valley flourished well into the 20th century. The industrialization of the northern Santa Clara Valley took place in the 1970's and 1980's. Development pressures resulting from the influx of the microchip and other high-technology industries caused the urbanization of much of the rural and agricultural land in that area. The effects of urbanization have presented a serious threat to existing cultural resources in the County.

Major areas of archaeological resources are the Isabel Valley Archaeological District, the Santa Teresa Archaeological District, the Circles Within Circles Archaeological District (near Morgan Hill), the Uvas Creek-Little Arthur Creek Archaeological District, the Upper and Lower Bodfish Creek Archaeological Districts, the Leavesley Road Alamas Creek Archaeological Area, and the Pacheco Pass Creek Archaeological District. Ohlone Indian village sites have been identified in Gilroy and Los Altos Hills, and shell mounds in Mountain View and Milpitas. Two other archaeological sites, the Coyote Creek Archaeological District and Poverty Flat Site in Henry Coe State Park, are listed on the National Register of Historic Places.

Historical Resources

Historic resources from the Mexican era include the Vacqueros Adobe Site and Hernandez Adobe in Los Gatos; Arroyo de San Jose (Juan Bautista de Anza's encampment) in Cupertino; the Juan Prado Mesa Adobe site in Los Altos Hills; Palo Alto; Jose Alviso Adobe and Jose Higuera Adobe in Milpitas; the Mission Corral Site, Berryessa/Fernandez Adobe, Adobe Indian Dwelling, and Mission Santa Clara de Assisi in Santa Clara; and Peralta Adobe, Roberto-Sunol Adobe, the De Quevedo Adobe Site, and the first site of Pueblo de San Jose Guadalupe in San Jose.

Historic sites are clustered in unincorporated areas in and around San Jose and other cities in the County. There are also clusters of several historic sites in the Los Gatos area, in the Coyote area near Metcalf Road, the settlement known as Old Gilroy, the Madrone area, the New Almaden historic district, Stanford University, Mt. Hamilton Road, and around the South County communities of Gilroy, San Martin, and Morgan Hill. Many of the historic sites listed are residences, but facilities range from windmills and tankhouses in the South County to Lick Observatory on Mt. Hamilton,

Historic Heritage Commission and Review Process

The County's Historic Heritage Commission is an eleven member body appointed by the Board of Supervisors. It was established in 1972 by County ordinance to promote and encourage appreciation, recognition and preservation of heritage resources. The Commission is advisory to the Board of Supervisors and all County agencies:

- in all matters pertaining to historic sites, buildings, event documents and artifacts related to County history;
- on nominations for State Points of Historical Interest, California Landmarks, and the National Register of Historical Places; and
- on any and all matters referred by the Board of Supervisors.

The commission also reviews plans and applications for properties located in the following districts:

- a) Historic Conservation District, which includes New Almaden H1 Zoning District;
- b) Portuguese Orchard H2 District;
- c) 1939 World's Fair Japanese Buildings (Sakai Property) H3 District; and
- d) any additional historic districts approved by the Board of Supervisors.

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the Gilroy Hot Springs spa buildings, William E. Riker's "Holy City" in Los Gatos, and several mines and other sites representing the County's industrial history.

Cultural and Historic Resource Protection

State and County Agencies to protect historic resources were formed under the impetus of the National Historic Preservation Act and other federal laws. The State Office of Historic Preservation manages programs to survey and register historic sites, grants tax credits and restoration grants to encourage rehabilitation of historic buildings, and monitors local environmental review. There is also an element of the State Uniform Building Code (UBC), called the State Historic Building Code (SHBC), that addresses the unique construction problems inherent in historic buildings. The SHBC applies only to buildings that are on the National Register of Historic Places, are California Registered State Historic Landmarks, are designated Points of Historic Interest, or are listed on the City or County inventories of historical or architecturally significant sites, landmarks, or districts¹.

The primary governing agency to protect historic resources in Santa Clara County is the County Historical Heritage Commission. The Historical Heritage Commission publishes the "Santa Clara County Heritage Resource Inventory," which is the official listing of unincorporated historic sites in the County. The inventory was first published in 1979 and is updated as historic sites are brought to the attention of the commission. A computer data base of all designated historic sites in the unincorporated area was prepared in 1993. New listings in the inventory are approved by the Board of Supervisors.

Historic Districts listed on the National Register and in the Heritage Resource Inventory are the Alviso Historic district (Embarcadero de Santa Clara), and the San Jose Downtown, St. James Square, Hensley, and New Almaden districts. Also of historic note are the Galindo-Leigh House in Campbell; Woodhills (Older House) in Cupertino; Norris Cabin near Gilroy; Griffin House and Carriage House near Los Altos; Forbes Flour Mill in Los Gatos; Villa Mira Monte (Hill House) in Morgan Hill; Rengstorff House in Mountain View; Professorville in Palo Alto; St. Joseph's Church in San Jose; James Lick Mill in Santa Clara; Villa Montalvo (Phelan estate) in Saratoga; and Weller ranch in Milpitas.

The Santa Clara County Historical Resource Database lists all known historic sites in the unincorporated areas of the County and is the document used to determine whether or not a project is likely to impact an historic site. If an historic site will be impacted by a proposed project, information about the project is given to the Historical Heritage Commission, and no action is taken on the project without the recommendation and action of the Commission. If there is an historic structure on a site that will not be impacted by the project, the Commission is notified about the project.

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Historic and archaeological sites are cultural heritage resources that are of great concern in the review of development applications. Provisions of the California Environmental Quality Act (CEQA), emphasize avoidance of cultural resources in development so as to avoid significant impacts rather than have to mitigate impacts to these delicate, often unique resources.

In Santa Clara County, once a property has been found to be a potential archaeological site, information about the site is sent to the Northwest Information Center (NWIC) at Sonoma State University. The NWIC is one of the 11 Information Centers that compose the California Archaeological Inventory, which is run by the State Office of Historic Preservation. The Information Centers "maintain archaeological data, organize cooperation among archaeologists, provide information to the public, review environmental impact reports, provide consulting services, and assist local government planning agencies²."

Draft 1994 General Plan Strategies

The Countywide and Rural Unincorporated strategies for the protection of heritage preserves are the same, and are presented below:

Strategy 1: Inventory and evaluate heritage resources.

Strategy 2: Prevent, or minimize, foreseeable adverse impacts.

Strategy 3: Restore, enhance, and commemorate resources as appropriate.

Policies and Regulations

A. Plan Policies that Foster Environmental Protection

This section of the EIR discusses existing cultural and historic resource policies, ordinances and regulations in the County that serve to protect the rural unincorporated environment. It begins with environmental protection policies of the 1980 General Plan that are carried forward to the Draft 1994 General Plan. This section continues with a discussion of substantive policy revision in the Draft 1994 General Plan that are intended to strengthen environmental protection. It is followed by a discussion of other ordinances and regulations implemented by the County or other levels of government to guide growth in an environmentally sound manner. This body of controls provides protection to heritage resources.

Policies from the 1980 General Plan

Plan policies are designed to protect heritage resources both natural and man-made. They may include historical sites, structures, or areas, archeological and paleontological sites and artifacts and additionally historical and specimen trees. The County's Historical Heritage Inventory will be maintained and used for review and decision making for projects [R-RC 83].

The policies serve to protect resources and prevent their destruction unless they are seen by the Historic Heritage Commission as insignificant or there are overriding public benefits involved [R-RC 84]. If preservation is compromised, mitigations may be imposed by the County [R-RC 85]. Additional policies address the demolition of resources, encouragement of historic districts and the protection of heritage or old growth trees [R-RC 88-90].

Substantive Policy Changes in the Draft 1994 General Plan

The policies set forth in the Draft 1994 General Plan strengthen resource protection by encouraging the restoration, enhancement and commemoration of the resource appropriate to the value and significance of the resource. All rehabilitation activities should comply with federal Standards for Rehabilitation [R-RC 92]. The public's awareness of these heritage resources is also to be encouraged [R-RC 93].

B. Ordinances and Regulations that Reduce Impacts

Archaeology

County Ordinance Code Section B6-18; B6-20: This ordinance states the procedures to be followed in the event of an encounter with human skeletal remains or artifacts and discovery of an Native American burial site. The process involves the County Engineer, the County Coroner, the County Coordinator of Indian Affairs, the Native American Heritage Commission, and an advisory committee made up of three persons of Costanoan descent, two professional archaeologists, and a person with background in civil engineering. These professionals contribute to the determination of how to handle archaeological resources discovered.

CEQA

County Initial Study Checklist requires analysis of impacts to archaeological, paleontological and historic sites. Projects sponsors are then referred to Sonoma State University to determine whether a cultural resources study should be performed on a site proposed for development.

Historic Resources

County Ordinance Code Section C1-91: Structures that are designated as a Heritage Resources by the County cannot be demolished unless the Board of Supervisors finds that there is not feasible alternative to demolition.

Zoning Ordinance

Historical Conservation District (Article 31): Districts given the "H" designation have special regulations for the preservation of historic sites, historic structures, buildings of architectural significance, and other natural and man-made heritage resources. Special regulations include requirements for Architectural and Site Approval, development standards, demolition, and types of uses permitted within the historic district.

C. Significance Criteria

CEQA addresses environmental impacts to cultural resources in two ways. *Supplementary Document G(j)* indicates that a project would result in a significant effect on the environment if *it will disrupt or adversely affect a prehistoric or historic archaeological site of a property of historic or cultural significance to a community or ethnic or social group, or a site except as part of a scientific study.* Appendix K of CEQA provides recommendations for the mitigation of impacts to archaeological resources and criteria for determining "important" archaeological resources. For purposes of this EIR impacts to cultural resources are also considered significant if implementation of the Draft 1994 General Plan would result in the demolition or adverse alteration of a National Register of Historic Places listed or eligible property, or the loss of the relationship between a nationally recognized historic property and its historic content.

Impacts and Mitigations

Impact 1. Loss or Disturbance of Significant Archaeological Resources. Implementation of the Draft 1994 General Plan has the potential to affect archaeological resources through the development of presently undeveloped land. The County has identified areas of sensitivity and some of these fall within areas that could be developed under the Plan. These areas are often near creeks, Hillsides, roadways passes or other prominent geographic features.

Lands most likely to be affected would be those in the Rural Residential designation where most growth is likely to occur. However, most of the lands designated as Rural Residential are already developed, and the remaining area for development is small. Land use projections show the possibility of 400 subdivision parcels being created under the Plan, with 165 in the Rural

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Residential area³. With each subdivision application, the project would be reviewed under CEQA criteria and projects would be referred to Sonoma State University's database to determine if a cultural resources study should be prepared. An additional protection is the allowance for clustering on lands designated as Rural Residential and Hillside. Clustering would allow avoidance of sensitive resource areas as well as allowing the resource area to be designated as open space.

Hillside, Agricultural and Ranchlands designations require large parcel sizes. Much of this land would have been used for agriculture and ranching purposes historically. These parcels would have a minimum size of 20 acres and so it would be feasible to avoid almost any known cultural resources. It is most likely that any historic or cultural resource on land that is under agricultural use would have been disturbed by the use of agricultural machinery.

The CEQA review process and County policies and ordinances designed to protect and preserve cultural resources would prevent the loss of significant archaeological resources as a result of development under the Draft 1994 General Plan. *The impact of development on archaeological resources is a less than significant impact.*

Mitigation Measure: No further mitigation is required.

Impact 2. Cumulative Development on Loss of Archaeological Resources. Some growth would occur in the County which is not directly attributable to the Draft 1994 General Plan. This growth would occur on a projected 2,400 existing lots of record. *Cumulative Impacts on cultural resources are possible and are not within the control of any government agency. Development allowed under the Plan would not contribute to cumulative impacts because it would be sufficiently mitigated by policies of the Draft 1994 General Plan and existing regulations and ordinances.*

Mitigation Measure: No further mitigation is required for the Draft 1994 General Plan and none is feasible for cumulative development which is outside government control.

Endnotes to Cultural and Historic Resources Chapter

Chapter 5P: *Cultural and Historic Resources*

1. Office of the State Architect, "California State Historical Building Code." September, 1985.
2. Christian Gerike, "A Source of Resource Information for Local Planning," May, 1988.
3. Total Rural Residential parcels created by subdivision taken from Chapter 5A, Table 5A-3. $(156 \text{ subdivisions} / 14 \text{ (years of known data)} \times 15 \text{ (year life of the Plan)}) = 165$.

CHAPTER 6 REQUIRED CEQA CONSIDERATIONS

A. Short-term Uses Versus Long-Term Productivity

CEQA requires that an EIR describe the long-term effects of the proposed project which adversely affect the state of the environment. Future development in accordance with implementation of the proposed plan would allow urbanization into currently undeveloped areas. Short-term and long-term uses of the environment associated with implementation of the plan would result in adverse impacts to natural resources productivity of lands subject to urban development. Short-term impacts are primarily related to construction activities on site-specific projects and could involve air quality, traffic, noise, land use, visual, and biological resources. Project-specific mitigation provided for in subsequent EIRs would mitigate some short-term impacts.

Unavoidable long term impacts would include countywide cumulative traffic, earthquake-related loss to life and property, and cumulative impacts to schools that are at near capacity. Specific cumulative effects anticipated with implementation of the plan are discussed throughout section 5 of this EIR. The proposed plan includes goals, policies, and recommendations designed to reduce the significance of long-term impacts associated with implementation of the plan, to the extent feasible, and to create community benefits that can be balanced against unavoidable impacts.

With regard to project timing, implementation of the 1994 Draft General Plan policies is justified at this time due to its potential to improve the degree of guidance and control in County policies and standards which facilitate feasible measures to protect the environment. In many ways, the proposed plan's policies are environmentally superior to the existing plan, so timely implementation would be important to environmental protection and resource conservation.

B. Growth-Inducing Impacts

Growth-inducement can be understood in terms of infrastructure extensions (roads, water and sewer mains, and utility lines), land use succession processes and job growth triggered by a given project.

Infrastructure systems designed to serve the rural unincorporated areas, as well as extensions of existing urban services in other areas could have growth-inducing impacts if excess capacity were built into the systems. The plan does limit growth by directing urban development to occur within the USAs of incorporated cities (where existing infrastructure is already likely to exist).

Due to the small amount of growth anticipated by the plan, roadway construction is not anticipated to result in growth-inducing impacts. It is unlikely that large multi-lane roadways (which are usually those most growth-inducing) would be required to serve future development. Because of the existing constraints on the County's water and sewer systems, the issue of growth inducement from excess capacity is not likely to exist. This plan would allow for the future expansion and/or building of a new airport within the County. There are no current plans for expansion or building at this time. However, should it occur sometime in the future, it could be considered growth-inducing due to an increase in service.

Land use succession refers to the tendency of economically marginal land uses to be replaced by larger, more intensive uses that would respond to strong economic trends. As a whole, the policies of the 1994 plan would not induce growth because they place substantial emphasis on preserving existing land use patterns and resources in rural areas. However, individually, there are some designations that could result in growth-inducing impacts. These include Rural Residential, Roadside Services, and golf courses which are permitted in certain designations. Additionally, any expansion of urban development outside of an existing USA would be considered growth-inducing.

The non-urban land use designation that most accommodates growth is Rural Residential. As noted in Chapter 5A-Land Use, the 1994 Draft Plan would make it more difficult to expand these areas. Other policies noted in the Land Use chapter place severe restrictions on industrial, commercial and institutional uses in the rural unincorporated area. These would tend to preclude the types of development that could establish a nucleus of uses that over time would cause further development outside urban areas. The Roadside Services (RS) policies are not sufficiently specified to prevent inefficient land use patterns. As explained in the Land Use chapter, the present application procedure for amendments to RS has resulted in a proscriptive rather than prescriptive policies, which in turn have resulted in inefficient land use patterns which are often associated with premature development and can be growth-inducing. Golf courses are currently an allowed use within the A zone. Because people often seek to live around them, they tend to be growth-inducing.

Population increase implicit in the plan will induce the growth of commercial facilities. However, the plan already anticipates the need for commercial growth and adequate existing uses and/or future designations exist.

Non-residential land use designations, which supply the jobs potential for the plan, are such that jobs in the unincorporated area are anticipated to decrease over the 15-year life of the plan. With respect to provision of jobs, the plan is not anticipated to be growth-inducing.

C. Significant Irreversible Environmental Changes

Significant irreversible environmental changes as defined by CEQA (Section 15126 (f)), would include the commitment of non-renewable resources (such as sand, gravel, etc.) and environmental damage that could result from the proposed project's implementation. Although the proposed project consists of goals and policies that make up a land use plan rather than a

site-specific development, it can reasonably be assumed that implementation of the plan would lead to future site-specific developments on certain parcels. The irreversible environmental changes which could ensue from allowed development within the plan includes the following:

- Decrease in viable farmland acreage and/or loss of prime agricultural soils due to development on agriculture parcels;
- Increase in impervious surfaces from building pads, new roads, driveways and patios;
- Potential fragmentation or damaging of certain habitats and wildlife corridors from increased human activity and from extension of roads into previously inaccessible or relatively undisturbed areas.

It should be noted that these potential changes are the same as would be expected should the 1980 plan remain in affect. Since the 1994 plan includes many policies which are more environmentally sensitive than those included in the 1980 plan, the degree of significance and intensity of any of the changes would be expected to be equal to or less than with the 1980 plan.



CHAPTER 7 ALTERNATIVES ANALYSIS

Alternatives to the Proposed Draft 1994 General Plan

In accordance with the requirements of CEQA, Section 15126(d), this EIR evaluates the environmental impacts of alternatives to the proposed Draft 1994 General Plan. CEQA requires the evaluation of the "No Project" Alternative as well as alternatives that avoid or reduce one or more significant impacts of the preferred plan. (The preferred plan is the one evaluated in Chapter 5 of this EIR.) The relevant CEQA requirements are presented below:

"Alternatives to the Proposed Action. Describe a range of reasonable alternatives to the project, or to the location of the project, which could feasibly attain the basic objectives of the project and evaluate the comparative merits of the alternatives.

- (1) If there is a specific proposed project or a preferred alternative, explain why the other alternatives were rejected in favor of the proposal if they were considered in developing the proposal.
- (2) The specific alternative of "no project" shall also be evaluated along with the impact. If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.
- (3) The discussion of alternatives shall focus on alternatives capable of eliminating any significant adverse environmental effects or reducing them to a level of insignificance, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.
- (4) If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed but in less detail than the significant effects of the project as proposed.
- (5) The range of alternatives required in an EIR is governed by "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The key issue is whether the selection and discussion of

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alternatives fosters informed decision making and informed public participation. An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative."

This EIR does not evaluate alternative sites for the plan because that has no meaning in the context of a General Plan. The Santa Clara County General Plan cannot be carried out in any other County because it is the land use policy document for the land that comprises Santa Clara County's unincorporated area.

In CEQA section 15126, under "Discussion - Application of the Rule of Reason", the California Appellate Court (3rd District) held that CEQA does not require analysis of every imaginable alternative (Bowman v. Petaluma, 1986). What is required is the production of information sufficient to permit a reasonable choice of alternatives so far as environmental aspects are concerned, i.e., a range of alternatives that adequately represents the spectrum of reasonable alternatives. In the *Laurel Heights* case, the Court further indicated the Lead Agency must provide its rationale for selecting or defining alternatives in order to disclose the analytic route from evidence to action, showing how it arrived at its conclusions.

The No Project Alternative is analyzed, as required by CEQA section 15126(d)(2). Following that analysis is a discussion of Alternatives B, the Mitigated Alternative, which encompasses the mitigations set forth in this EIR. Alternatives C-E were considered by the General Plan Review Advisory Committee (GPRAC) and County staff. A rationale is provided for each alternative, as to why it was rejected from further analysis and should not be further considered by the decision makers when deliberating upon this EIR.

The impacts of the No Project alternative are qualitatively described and compared to the impacts that would be generated by the preferred plan. When there would be no difference, that fact is noted.

A. No Project Alternative

The No Project Alternative is defined as retention of the 1980 General Plan because that is the document that would be in effect if the proposed General Plan is not adopted. As a general statement, if the No Project Alternative is selected by the County, none of the impacts of the preferred plan that differ from the 1980 General Plan, either adverse or beneficial, would occur. The individual impact topics are discussed below.

1. Land Use

There would be no change in overall growth and development under the No Project Alternative because the growth under both the 1980 and 1994 General Plans are the same. The growth projections for the preferred plan are simply an extrapolation of the growth rate of the last 14 years, which occurred under the 1980 General Plan.

The land use designations under the No Project Alternative would remain substantially the same as at present. Compared to the preferred plan, there would be changes in the following areas:

Urban Growth Boundaries: The 1980 General Plan did not include strong policies for designating permanent urban growth boundaries. Although they are only advisory in the 1994 General Plan, the County has provided a stronger, resource-based rationale for them. The political difficulties of establishing UGBs continue to place their feasibility in question, so there are not likely to be differences in impacts due to this policy. *The UGB policies would have beneficial impacts on resource conservation and efficient land use planning.*

East Foothills: Under the No Project Alternative, the East Foothill land use policies would remain intact. There would continue to be the opportunity for development to be approved at densities that are higher than elsewhere for the 'Hillsides' and 'Rural Residential' designations. Were this process to continue, there could be a never-ending spiral of density increases. This could ultimately lead to an suburban enclave in this area, with all of the impacts associated with scattered site development: inefficient land use patterns; high costs of providing public services, the need to travel long distances to meet everyday needs and associated air quality, energy and noise impacts. The administrative difficulties with interpreting and fairly applying the East Foothills land use policies would continue as well. *Continuation of the East Foothills policies would have a significant impact.*

Mitigation Measure: Adopt the 1994 General Plan or amend the 1980 General Plan to eliminate the East Foothills policy. [Responsibility: Santa Clara County]. *This measure would reduce the impact to a level of insignificance.*

Golf Courses: Under the No Project Alternative, it would still be possible to propose golf courses in the Agriculture Preserve area (i.e., the AL-designated area, south and east of Gilroy). In other A-designated areas, no study of the impacts of golf courses is required to recommend mitigation measures, (as is the case under the 1994 General Plan) although an EIR would be required. Were such projects to be approved, they would

CHAPTER 7: *Alternatives Analysis*

reduce the supply of agricultural land and induce residential and commercial growth in the vicinity. Although the County would have discretionary authority to deny such projects, *the 1980 General Plan has the potential to significantly impact agriculture land.*

Mitigation Measure: Adopt the 1994 General Plan or amend the 1980 General Plan to require similar policies and studies. [Responsibility: Santa Clara County]. *This measure would reduce the impact to a level of insignificance.*

Hillsides: The No Project Alternative fails to provide several important environmental protection measures proposed in the 1994 General Plan. First, the, proposed General Plan encourages non-residential clustering and requires such uses to be of low density compatible with the vicinity. Second, non-residential uses are required to avoid adverse environmental impacts. Third, non-residential uses are required to not over-burden infrastructure and public services by showing water consumption and traffic generation rates, waste water generation rates, noise effects and other impacts on the environment. As the 1980 General plan does not include such policies, *the No Project Alternative has the potential to cause significant impacts to Hillside areas.*

Mitigation Measure: Adopt the 1994 General Plan or amend the 1980 General Plan to require similar policies and studies. [Responsibility: Santa Clara County]. *This measure would reduce the impact to a level of insignificance.*

Rural Residential (RR): The policies of the 1980 General Plan enabled the gradual expansion of the Rural Residential area into Hillside, Agriculture and Ranchlands. This process undermines goals and policies of the General Plan to preserve agriculture land and open space, and concentrate urban development in already-urbanized areas. The No Project Alternative does not allow for clustering in the Rural Residential area, and therefore encourages a land use pattern of scattered site development at the minimum density of five units per acre. By comparison, the proposed General Plan would constrain the expansion of the RR area. It also would permit residential clustering in the Rural Residential area with densities as low as one unit per acre and concomitant preservation of up to 90% of the site in permanent open space. This would have the effect of conserving land by siting housing in tighter clusters than would otherwise be allowed. As the 1980 General Plan does not include such policies, *the No Project Alternative has the potential to cause significant impacts with respect to loss of Hillside, Ranchlands, Agricultural lands and open space areas.*

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Mitigation Measure: Adopt the 1994 General Plan or amend the 1980 General Plan to require similar policies and studies. [Responsibility: Santa Clara County]. *This measure would reduce the impact to a level of insignificance.*

RV Parks: The No Project Alternative permits RV parks in Hillside and Roadside Service areas. RV parks were originally permitted in these areas to support recreational uses. Some have become long-term residences, requiring services that may not be available at an appropriate level for permanent dwellings. As such, they are inappropriate uses in Hillside areas where the otherwise permitted residential density is 20-160 acres per unit. Their proliferation would, over time, establish suburban enclaves in Hillside and RS areas, as their need for services are gradually met with commercial, educational and other facilities. While RV parks would continue to be permitted uses in Hillside and RS areas under the preferred plan, the 1994 General Plan proposes an interim policy to assure that RV parks are consistent with their potential use for long-term, high density housing; that they are of a density compatible with those of public campgrounds; and that they conform to other adapted policies, ordinances and design standards. The 1994 General Plan proposes that the interim policies stay in place until a study of RV parks is done to establish the appropriate conditions of approval. As the 1980 General Plan does not include such policies, *the No Project Alternative has the potential to cause significant impacts from RV parks that are incompatible with some goals and policies of the General Plan.*

Mitigation Measure: Adopt the 1994 General Plan or amend the 1980 General Plan to require similar policies and studies. [Responsibility: Santa Clara County]. *This measure would reduce the impact to a level of insignificance.*

2. **Agriculture**

The No Project Alternative would have weaker agriculture policies than would the proposed General Plan. The four proposed policies that would strengthen agriculture in the County are described in the Agriculture section of Chapter 5 of this EIR. The proposed General Plan recommends that LAFCO discourage urban expansion when there is more than a five-year supply of land in a USA; it requires a study of the Agricultural Preserve to assess the effects of city, County and LAFCO policies on the viability of agriculture; it promotes an inventory and monitoring of the supply of agricultural lands; and restricts golf courses in the Agriculture Preserve while calling for environmental studies for golf course proposals in other agriculture lands. The general thrust of these policies is to give decision-makers better information regarding growth and its encroachment on agricultural resources. Whether it is used to actually

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protect agriculture more than would be the case under the No Project Alternative depends on how it is applied by decision-makers. The only differences in tangible environmental impacts is the policy to preclude golf courses in the agriculture preserve, as discussed above in land use. *Under the No Project Alternative, there would be potentially significant impacts to the Agriculture Preserve from golf courses.*

Mitigation Measure: Adopt the 1994 General Plan or amend the 1980 General Plan to require similar policies and studies. [Responsibility: Santa Clara County]. *This measure would reduce the impact to a level of insignificance.*

3. **Biology**

The biology section of Chapter 5 of this EIR lists four proposed policies of the 1994 General Plan that improve protection of biological resources. These policies would be absent under the No Project Alternative. These policies include mapping to increase knowledge of habitat resources and integrating them with the planning process; proactive habitat protection measures; stream and riparian area restoration; and preservation of habitat linkages and migration corridors. The No Project Alternative lacks these policies and therefore is a weaker document, less capable of protecting biotic resources. It is much more likely that there would be significant impacts to critical habitat, including riparian resources, under the No Project Alternative than the preferred plan. As the 1980 General Plan does not include such policies, *the No Project Alternative has the potential to cause significant impacts to critical habitat and thereby foster incompatibilities with the resource conservation goals and policies of both the General Plans.*

Mitigation Measure: Adopt the 1994 General Plan or amend the 1980 General Plan to require similar policies, studies and mitigation measures as identified in this EIR. [Responsibility: Santa Clara County]. *This measure would reduce the impact to a level of insignificance.*

4. **Transportation, Air Quality and Noise**

Traffic Volume: The No Project Alternative would have vehicle trip generation similar to the proposed General Plan because the amount, rate and location of growth would be similar. Consequently, there would be no changes in the expected traffic volumes, distribution and impacts. However, the preferred plan would include numerous new policies that foster environmental protection, as noted in the transportation section of

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Chapter 5 of this EIR. *These policies of the 1994 General Plan have the potential to reduce vehicle trips and associated noise and air quality impacts by an unknown amount.*

Mitigation Measure: Adopt the 1994 General Plan or amend the 1980 General Plan to require similar policies, studies and mitigation measures as identified in this EIR. [Responsibility: Santa Clara County]. *This measure would reduce the impact to a level of insignificance.*

Substandard Roads and Circulation System: The County has many rural roads that are inefficiently laid out and are used by too many vehicles including trucks that are larger than can safely be accommodated. The preferred General Plan addresses this with the policy that calls for improving road safety while avoiding environmental impacts. The No Project Alternative lacks this policy statement, and is therefore a weaker document. Nonetheless, road construction would require environmental review which could accomplish the same objectives as the proposed new policy. The 1994 General Plan also calls for a comprehensive plan for traffic and circulation in the rural unincorporated area so that the County can begin to solve rural road problems in a consistent manner. However, funding has not been secured for the plan nor for needed road improvements. Consequently, *substandard roads and circulation patterns remain a significant impact.*

Mitigation Measure: Adopt the mitigation measures recommended in the transportation section in Chapter 5 of this EIR. *This would reduce the impacts to a level of insignificance.* [Responsibility: Santa Clara County Transportation Agency and Planning Office.]

5. Hazardous Materials

Leaky Fuel Tanks: There is the potential for human exposure and environmental damage from leaky fuel tanks under the No Project Alternative, as would be the case with the proposed plan. *This is considered a significant impact.*

Mitigation Measure: Same as for the Draft 1994 General Plan.

Transport of Hazardous Materials: As with the proposed plan, *in the unlikely event of a spill of hazardous materials, there could be significant impacts to humans and the environment.* However, this would not be attributable to the existing General Plan.

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Mitigation Measure: There are no known mitigation measures that can absolutely ensure against an unlikely but catastrophic spill of hazardous materials. *Were this to occur, it could have unavoidable adverse impacts.*

6. Aviation Hazards

The policies of both the 1980 and 1994 General Plans are similar with respect to aviation hazards in that they reiterate safety and land use policy recommendations of the ALUC. The proposed General Plan recognizes the need for an additional airport which could have a variety of environmental impacts, and calls for these impacts to be mitigated. Under either plan, an EIR would be required for a new or expanded airport, but the proposed plan is stronger in calling for the impacts to be mitigated. *If an airport were to be proposed under the No Project Alternative, it would have the potential to cause significant impacts.*

Mitigation Measure: As no airport is actually being planned, there are no additional mitigation measures at this time beyond 1980 General Plan policies and the ALUC. To be meaningful and effective, those mitigations would need to be based on a specific project and site.

7. Geology

The policies of the 1980 and 1994 General Plan are similar regarding geology. *Under both plans, there would be a exposure of people and property to a major earthquake which would cause significant impacts.*

Mitigation Measure: Although the County would implement emergency response plans in the event of a major earthquake, it is not possible to mitigate loss of life and property to a level of insignificance. *This remains an unavoidable adverse impact associated with growth.*

8. Energy

Although the 1980 General Plan lacks the two energy consumption policies in the preferred plan, *the growth under the No Project Alternative General Plan is not expected to have significant energy impacts.*

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Mitigation Measure: No further mitigation required.

9. Archaeology

The No Project Alternative has the potential to cause cumulative impacts to archaeological resources in that grazing, agriculture and scattered residential development could impact known and presently unknown areas, sites and objects. This is particularly true for development on lots of record for which there is no public review process to determine whether a proposed site contains any resources. The same is true for the preferred plan, although it includes somewhat stronger policies to recognize, protect and enhance such resources. *This is a potentially significant impact.*

Mitigation Measure: As it is not possible for the County to regulate development on lots of record or existing activities that might impact cultural resources, this remains an *unavoidable adverse impact.*

Overall, the No Project Alternative is not considered environmentally superior to the proposed project (Draft 1994 General Plan) and was rejected as not meeting the purposes for a revised General Plan as set forth in Chapter 1.

The following discussion of alternatives was provided by County staff.

B. Mitigated Alternative

CEQA section 15126(d)3 requires that an EIR focus on alternatives to the proposed project so that one or more significant impacts can be reduced or eliminated. This is sometimes called the "mitigated alternative." Typically, it involves lowering the amount of growth that would be permitted under a plan or shifting growth to less sensitive areas. Neither of these approaches would constitute a mitigated alternative to the proposed Santa Clara County General Plan. The General Plan is projected to involve very little new development that is subject to the discretionary approval authority of the County. Although it is physically possible to get more than the 400 new subdivision units projected in this EIR, the market trends and political culture of the County make this unlikely. Most of the residential development that is projected would be on existing lots of record, over which the County has no discretionary authority since the land has already been subdivided and owners have a right to build at least one unit on such parcels. Both the new subdivision units and development on existing lots of record would result in only 2,800 units in the entire unincorporated area over the 15-year life of the General Plan. Although this would not be affordable housing for the most part, it would help satisfy the need for housing

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in the County and improve the countywide jobs-housing balance. For these reasons, this EIR does not evaluate a lower amount of residential development.

Likewise, non-residential development is projected to be very limited, while jobs in the unincorporated rural County are expected to decline between 1990 and 2010. To provide a balanced land use plan, the opportunity for economic growth, and facilities that meet community needs this EIR does not recommend an alternative that reduces non-residential development.

Regarding the location of growth, numerous strategies and policies of the General Plan emphasize and require development to occur in the already-urbanized areas. This includes infill development and development within cities' USAs. From an environmental perspective, these are highly beneficial policies. Although there are impacts associated with the scattered, low density development pattern that would be allowed in the Hillside and Rural Residential areas, the overall level of projected growth is very low in deference to preserving land use relationships conducive to preserving the agriculture and grazing economic base of the rural unincorporated area. Moreover, the preferred plan encourages clustering to more efficiently use land and preserve open space resources.

In defining an alternative that avoids or reduces one or more significant impacts of the proposed plan, there are several that are unavoidable and thus would not be improved by an alternative. These include (a) loss of life and property due to a major earthquake; (b) cumulative impacts on schools that are at or near capacity; and (c) countywide cumulative traffic.

General Plan policies that can cause significant impacts include (a) loss of agricultural land due to golf courses and other uses; (b) RV parks in Hillside and RS areas; (c) the Hillside strategy that allows a variety of land uses in remote areas and (d) the ambiguity of the Roadside Service (RS) designation which is reactive rather than proactive land use planning. *The Mitigated Alternative addresses these issues by integrating into its policies and implementation measures the mitigation measures set forth in this EIR.*

C. Redesignation of Certain Ranchlands Alternative

This alternative would involve adoption of the 1994 Draft General Plan with redesignation of various Ranchlands areas to Hillside. This alternative incorporates recommendations made in the 1987 Report of the Open Space Preservation 2020 Task Force (OS 2020); specifically that certain areas be redesignated Hillside from Ranchlands in the County's General Plan Land Use Element. It proposed that the County redesignate all 'Ranchlands':

- a) in the Santa Cruz Mountains; and,

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- b) up to and including the first ridgeline in the Diablo Range and in the Shingle Valley and Anderson Lake study areas.

Although the County Board of Supervisors accepted the overall OS 2020 report in 1987, it required no particular recommendation be immediately implemented, including the aforementioned proposal for redesignation.

Significant impacts and potential benefits which could be expected with this alternative are discussed below.

Environmental Impacts:

1. Growth-Inducement: Redesignation would result in significantly increased rates and amount of cumulative residential development over the time horizon of the 1994 Draft General Plan (15 years). This is due to the removal of 'Ranchlands' policies prohibiting major subdivision applications (5 or more lots) on as much as 50,000 acres or greater. Secondary impacts predicted to increase involve public facilities and school impacts, additional roads for access, increased traffic generation, water demand, and waste water disposal.
2. Introduction of new land uses, such as golf courses, that are allowed in 'Hillsides' areas but not in 'Ranchlands.'
3. Increased residential development and other uses not related to or supportive of agriculture or ranching, with potential for additional conflicts and incompatibilities with long-standing agricultural uses.
4. One possible environmental benefit of redesignation would be the potential for permanent open space and viewshed protection resulting from lands dedicated through cluster residential subdivisions under 'Hillside' policies and ordinances.

Decision of GPRAC and Rationale.¹

The issue was brought before the GPRAC at its February, 1994 meeting. The GPRAC concurred with the staff recommendation to retain all subject lands under their current 'Ranchlands' designation, for the following reasons:

- a. The primary intent of originally designating these lands as 'Ranchlands' in the 1980 General Plan is no less valid than it was in 1980 - that is, to preserve ranching and grazing lands rather than encourage subdivision for residential

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development. Although some of the subject areas are not as remote and inaccessible as others designated 'Ranchlands', the intent to preserve very large parcels (500-10,000 acres) in ranching uses was and is primary.

- b. 'Ranchlands' policies better preserve agricultural ranching than 'Hillsides' by minimizing subdivision, limiting overall population increases and public service demands, and reducing the potential for incompatible land uses.
- c. Given that very few land divisions within areas designated 'Ranchlands' have occurred since 1980, the concern is unfounded that continued subdivision of 'Ranchlands' to the minimum parcel size allowed, or "parcelization", would eventually make ranching inviable.
- d. The affected area represents 15% or almost 1 of every 6 acres designated 'Ranchlands'.
- e. Despite contentions that the mandatory clustering and open space dedication policies of the 'Hillsides' designation would help mitigate development impacts and permanently preserve open space, a significant number of projected 'Hillsides' subdivisions are not expected to be proposed as cluster projects, based on development history. In such cases, no clustering or open space dedication are required. To the extent that clustering does occur, some open space lands may remain available for ranching at the discretion of the land owners, but nothing prevents other uses being introduced in place of ranching, as allowed under the Hillside zoning ordinance.

The Redesignation Alternative as described above would not offer sufficiently enhanced environmental protection to warrant its adoption instead of the preferred Plan.

D. Planned Unit Development Alternative

This alternative would involve adoption of the 1994 Draft General Plan with the creation of a 'Planned Development' designation. 'Planned Developments' (PDs) or 'Planned Unit Developments' (PUDs) are typically intended to provide for greater flexibility in the unified design of large scale subdivisions or other unique developments than would ordinarily be allowed by standard zoning and development regulations. Most often they are employed by cities in regulating urban development of a large scale and to encourage developments with more than the minimal level of infrastructure and amenities.

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As defined within the context of this alternative, the PD designation would be a "floating designation" as the term is often used in regulation. It would not actually be applied to an individual property for use in regulating development until a General Plan amendment application is made and approved by the Board of Supervisors to redesignate a parcel or parcels. Were the PD designation created and applied as generally intended in planning and development regulation practice, it is assumed that the resulting projects would be of a more intensive nature or involve higher densities than would otherwise occur under existing designations and policies. (If a proposed use or project were allowed under existing General Plan policies and implementing ordinances, the PD designation would be unnecessary.)

Significant impacts and potential benefits which could be expected with this alternative are discussed below.

Environmental Impacts:

1. Possible growth-inducement. With greater potential for increased intensities/densities in developments occurring under the PD designation, a PD designation would allow more development on a given parcel than is currently allowed under existing land use designations.
2. Were it possible to require and secure a 90% ratio of open space dedication to development, as with the 'Hillside' requirement for clustered subdivisions, the PD designations could provide some measure of environmental benefits or mitigation for impacts from its associated development.
3. The open-ended nature of a PD designation, the unknown types of projects it might allow, and the fact that it would apply only to specific land areas in the future as a result of a General Plan amendment, makes it difficult to speculate further upon what types of impacts would be associated with its implementation.

Decision of GPRAC and Rationale:

The decision of the General Plan Review Advisory Committee at its March, 1994, meeting was that no PD designation should be created for the Land Use element of the General Plan. Should, however, a future proposal be put forward that is consistent with the fundamental urban development policies of the Plan and that cannot be as readily accommodated through an existing Land Use designation, the PD designation concept could be re-evaluated for possible use with such a project. Rationale, for the decision included:

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- a. There is no obvious need to create such a designation given that there is no land use the County currently wishes to allow or encourage in rural unincorporated areas that cannot be accommodated within existing Land Use designations.
- b. Creation of an open-ended PD designation, without a clear purpose as to the kind of development that it is intended to accommodate, could serve as an invitation to development proposals and speculative investments that are inconsistent with the goals of the 1994 Draft General Plan and its fundamental urban development policies.
- c. The County already allows applications for privately-initiated General Plan amendments, which can serve as a mechanism similar to a PD designation for achieving design flexibility of projects that do not precisely conform to existing policies and ordinances.
- d. It is conceivable that in the future, a large scale rural development proposal might be put forward that is consistent with the County's fundamental policies and might not be readily accommodated without amending an existing land use designation and/or ordinance. In such a case, nothing precludes the County from reconsidering the utility of a PD designation with a specific project to which it might apply.

The Planned Unit Development Alternative above would not offer sufficiently enhanced environmental protection to warrant its adoption instead of the preferred Plan.

E. Permanent Urban Limit Line Alternative

This alternative would involve adoption of the 1994 Draft General Plan with the establishment of permanent Urban Limit Lines (ULLs), as originally proposed by the 1980 General Plan. The 1980 General Plan recommended that a "line be established through joint City/County effort, that will define the limit of future urban expansion" (LU 97). Such policy language implies a permanent boundary agreement that fixes the ultimate limit of future urban expansion. Those policies were never implemented following the 1980 General Plan's adoption. However, as part of the review and revision of the 1994 Draft General Plan, County staff recommended that the policy concepts be retained but revised in favor of a long-term, 20-year Urban Growth Boundary (UGB) concept. (Please note that the UGB discussed throughout Chapter 5 of this EIR refers to an adjustable, rather than permanent urban growth boundary).

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Depending upon whether the County could engage the cooperation of the cities to implement a permanent urban limit line and the location of the actual boundary, the following environmental impacts would be associated with this alternative:

Environmental Impacts:

1. Assuming the location of the boundary is consistent with policies of the General Plan regarding compact urban development and which lands are unsuitable for urban development (steep slopes, subject to geologic, flood, or fire hazards, or difficult to provide urban services), the permanent urban limit line would be environmentally beneficial by eliminating most of the threat of urbanization to lands with critical resources or hazardous conditions.
2. With urban densities precluded from lands outside the permanent urban limit line, overall quality of life would be expected to improve through enhanced public health and safety (avoidance of natural hazards), enhanced scenic hillside preservation, and enhanced resource protection for mineral resources, agricultural lands, wildlife habitats, and water resources.
3. Possible adverse impacts of delineating a permanent urban line which allows for little future urban expansion would be to place virtually the entire burden of resource protection and resistance to proposals for urban uses and densities in open space lands on the County government, intensifying political pressures for increased development under County land use jurisdiction. To mitigate the potential for land uses in conflict with the intent of the urban limit line, it would be necessary to affect agreements between the jurisdictions limiting the uses and densities allowed on open space lands under County control.
4. Were the location of the permanent boundary line, however, to include a majority of lands currently within each city's Sphere of Influence boundaries, many of the aforementioned potential benefits would not be obtainable.

Decision of GPRAC and Rationale:

After prolonged discussion, the GPRAC obtained consensus for policies proposing the establishment of long term urban growth boundaries that would initially provide a 20 year supply of land necessary and suitable for urban development and/or redevelopment. The following provides the Committee's rationale in favor of adjustable, rather than permanent urban growth boundaries:

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- a. The potential adverse impacts of misjudging future growth, land supply, redevelopment potential, and other factors contributing to the delineation of the UGB argues for a process amenable to corrective action.
- b. The Committee acknowledged that nothing precludes any individual city from proposing that an UGB be considered permanent in part or in its entirety, if consistent with each city's general plan and/or growth management strategies and acceptable to the public.
- c. The UGB concept is beneficial in a number of respects, such as providing clear indication of the desired direction, location and extent of long term urban growth; providing enhanced protection for resources and hazardous areas from urbanization compared to 5-year Urban Service Area boundaries; and ensuring improved long term capital improvement planning and more efficient provision of urban services.

The Permanent Urban Limit Line alternative as described above would not offer sufficiently enhanced environmental protection to warrant its adoption instead of the preferred Plan.

Endnotes to Alternatives Chapter

1. Santa Clara County, Planning Office, information provided from GPRAC meetings, Bill Shoe.

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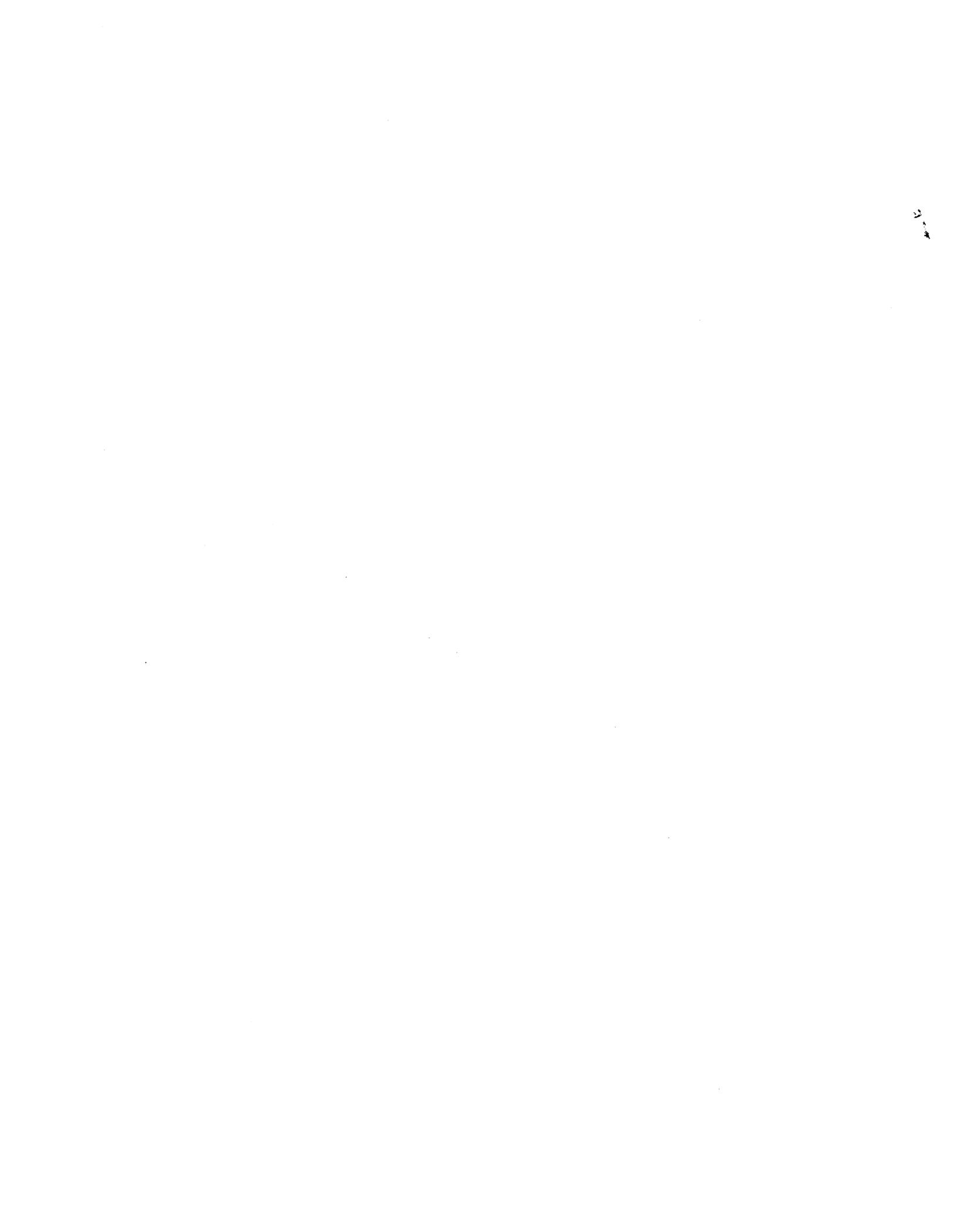
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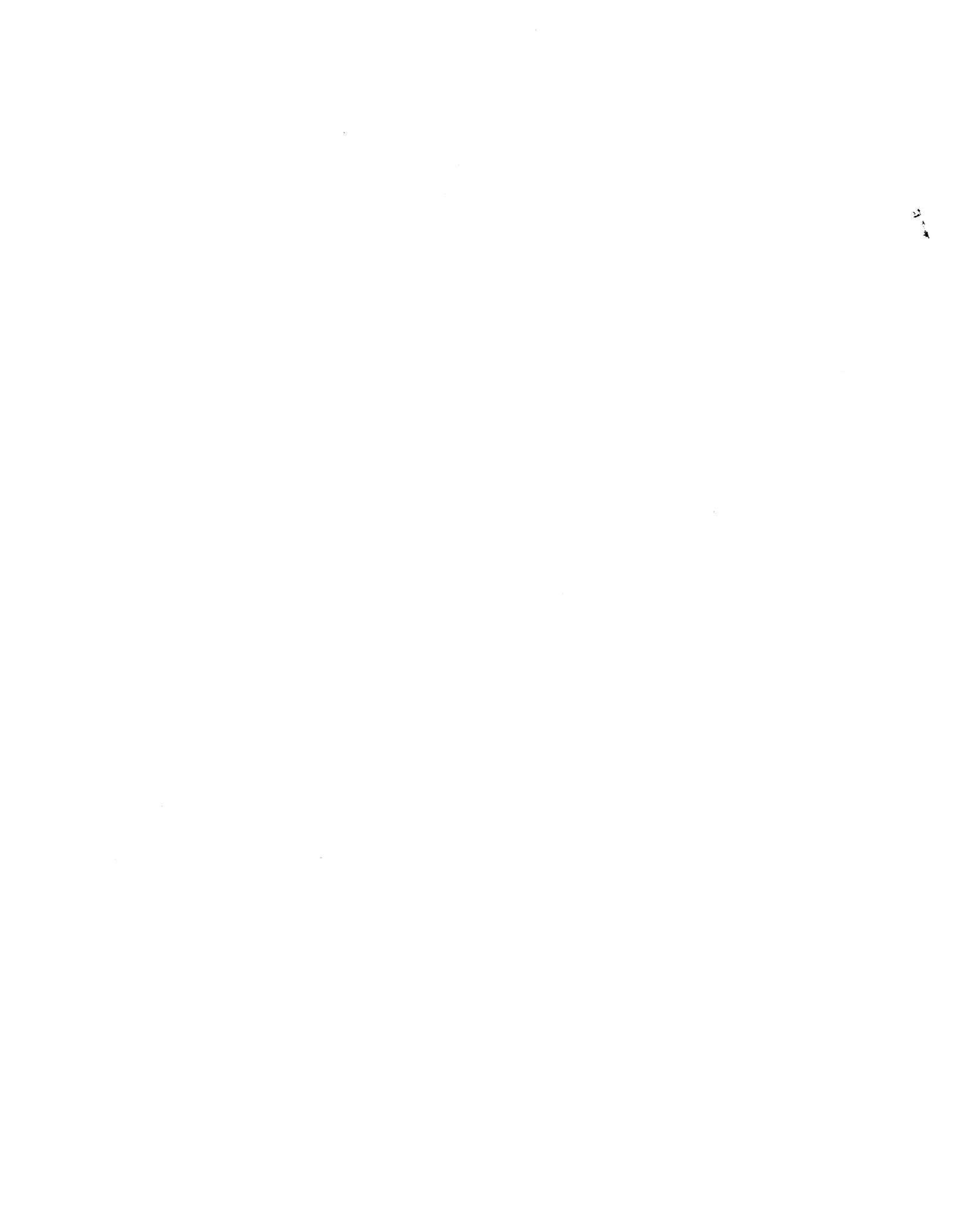
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CHAPTER 9
TECHNICAL APPENDICES



Agricultural Resources and Mineral Extraction Appendix

SANTA CLARA COUNTY
DEPARTMENT OF AGRICULTURE

FRUITS AND NUTS

ITEM	YEAR	HARVESTED ACREAGE	TONS PER ACRE	PRODUCTION TOTAL	UNIT	VALUE PER UNIT	TOTAL
Apricots	1993	685	2.50	1,713	TON	\$ 775.	\$ 1,328,000.
	1992	685	3.75	2,569	TON	665.	1,708,000.
Cherries	1993	985	1.70	1,675	TON	1,935.	3,241,000.
	1992	935	2.50	2,338	TON	2,120.	4,957,000.
Grapes	1993	1,455	2.75	4,001	TON	665.	2,661,000.
	1992	1,430	2.50	3,575	TON	690.	2,467,000.
Kiwi	1993	40	5.00	200	TON	2,100.	420,000.
	1992	40	5.00	200	TON	2,000.	400,000.
Pears	1993	100	11.50	1,150	TON	211.	243,000.
	1992	100	11.50	1,150	TON	222.	255,000.
Prunes	1993	700	2.50	1,750	TON	975.	1,706,000.
	1992	750	3.00	2,250	TON	895.	2,014,000.
Walnuts	1993	925	1.05	971	TON	1,300.	1,262,000.
	1992	950	1.15	1,093	TON	1,290.	1,409,000.
Miscellaneous ¹	1993	100					340,000.
	1992	110					375,000.
TOTAL	1993	4,990					\$ 11,201,000.
	1992	5,000					13,585,000.

¹Includes Apples, Peaches, Nectarines, etc.

SANTA CLARA COUNTY
DEPARTMENT OF AGRICULTURE

BUSHBERRIES AND STRAWBERRIES

ITEM	YEAR	HARVESTED ACREAGE	TONS PER ACRE	PRODUCTION TOTAL	UNIT	VALUE PER UNIT	TOTAL
Bushberries	1993	33	8.00	264	TON	\$ 1,955.	\$ 516,000.
	1992	30	5.50	165	TON	1,900.	314,000.
Strawberries	1993	195	17.00	3,315	TON	766.	2,539,000.
	1992	295	12.50	3,688	TON	580.	2,139,000.
TOTAL	1993	228					3,055,000.
	1992	325					2,453,000.

LIVESTOCK AND POULTRY

ITEM	YEAR	NUMBER OF HEAD	PRODUCTION LIVE WEIGHT	UNIT	VALUE PER UNIT	TOTAL
Cattle & Calves	1993	12,400	74,400	CWT	\$ 90.00	\$ 6,696,000.
	1992	11,250	61,875	CWT	80.00	4,950,000.
Breeding Stock	1993	900		EA	1,800.00	1,620,000.
	1992	800		EA	800.00	640,000.
Sheep & Lambs	1993	2,500	3,000	CWT	55.00	165,000.
	1992	1,700	2,040	CWT	55.00	112,000.
Hogs & Pigs	1993	850	1,913	CWT	50.00	95,650.
	1992	800	1,800	CWT	45.00	81,000.
Chickens ¹	1993	210,000	840,000	LBS	0.35	29,400.
	1992	150,000	600,000	LBS	0.04	24,000.
TOTAL	1993	264,250				\$ 8,606,050.
	1992	164,550				5,807,000.

¹Includes cull hens and other chickens from egg producers.

SANTA CLARA COUNTY
DEPARTMENT OF AGRICULTURE

LIVESTOCK AND POULTRY (CONTINUED)

ITEM	YEAR	PRODUCTION	UNIT	VALUE PER ITEM	TOTAL
Milk Fresh	1993	218,306	CWT	\$ 11.44	\$ 2,497,000.
	1992	202,765	CWT	11.61	2,354,000.
Processed	1993	1,020	CWT	11.05	11,271.
	1992	-----	CWT	-----	-----
Eggs, Chicken	1993	7,190,000	DOZ	.60	\$ 4,314,000.
	1992	7,340,000	DOZ	.51	3,743,000.
TOTAL	1993				\$ 6,822,271.
	1992				6,097,000.

INVENTORIES OF LIVESTOCK AND POULTRY (NUMBER OF HEAD)

ITEM	JANUARY 1, 1993	JANUARY 1, 1994
Milk Cows and Heifers that have calved	2,800	2,800
Other Cattle and Calves	67,000	67,000
Sheep and Lambs	3,700	2,200
Hogs and Pigs	100	100
Hens and Pullets of Laying Age	385,000	390,000

SANTA CLARA COUNTY
DEPARTMENT OF AGRICULTURE

VEGETABLE CROPS

ITEM	YEAR	HARVESTED ACREAGE	TONS PER ACRE	PRODUCTION TOTAL	UNIT	VALUE PER UNIT	TOTAL
Beans, Snap ¹	1993	450	5.00	2,250	TON	\$ 1,050.	\$ 2,363,000.
	1992	150	9.00	1,350	TON	890.	1,202,000.
Broccoli	1993	500	5.00	2,500	TON	360.	900,000.
	1992	490	4.00	1,960	TON	320.	627,000.
Cabbage	1993	225	17.50	3,938	TON	220.	866,000.
	1992	275	15.00	4,125	TON	200.	825,000.
Cauliflower	1993	100	4.5	450	TON	460.	207,000.
	1992	---	---	---	TON	---	---
Celery	1993	235	24.00	5,640	TON	170.	959,000.
	1992	160	30.00	4,800	TON	200.	960,000.
Chinese Vegetables	1993	300	15.00	4,500	TON	660.	2,970,000.
	1992	490	15.00	7,350	TON	370.	2,720,000.
Corn	1993	1,250	7.00	8,750	TON	325.	2,844,000.
	1992	1,150	7.00	8,050	TON	320.	2,576,000.
Cucumbers	1993	300	16.00	4,800	TON	240.	1,152,000.
	1992	350	16.00	5,600	TON	220.	1,232,000.
Garlic	1993	600	7.00	4,200	TON	600.	2,520,000.
	1992	600	7.50	4,500	TON	720.	3,240,000.
Lettuce Leaf	1993	1,500	10.50	15,750	TON	270.	4,253,000.
	1992	1,260	10.00	12,600	TON	315.	3,969,000.
Head	1993	335	16.00	5,360	TON	250.	1,340,000.
	1992	500	14.00	7,000	TON	280.	1,960,000.
Romaine	1993	100	14.00	1,400	TON	275.	385,000.
	1992	80	12.00	960	TON	250.	240,000.
Mushrooms	1993	105	130.00	13,650	TON	2,060.	28,119,000.
	1992	100	135.00	13,500	TON	2,000.	27,000,000.

SANTA CLARA COUNTY
DEPARTMENT OF AGRICULTURE

VEGETABLE CROPS (CONTINUED)

ITEM	YEAR	HARVESTED ACREAGE	TONS PER ACRE	PRODUCTION TOTAL	UNIT	VALUE PER UNIT	TOTAL
Mustard Greens	1993	25	4.00	100	TON	600.	60,000.
	1992	30	4.00	120	TON	660.	79,000.
Onions, Dry (Yellow & Red)	1993	300	23.00	6,900	TON	350.	2,415,000.
	1992	370	18.00	6,660	TON	285.	1,898,000.
Peppers Bell	1993	2,000	17.00	34,000	TON	235.	7,990,000.
	1992	1,800	19.00	34,200	TON	240.	8,208,000.
Wax & Chili	1993	600	18.00	10,800	TON	475.	5,130,000.
	1992	415	18.00	7,470	TON	460.	3,436,000.
Pumpkins	1993	---	-----	-----	TON	---	-----
	1992	350	12.00	4,200	TON	140.	588,000.
Spinach	1993	100	6.00	600	TON	600.	360,000.
	1992	90	5.50	495	TON	550.	272,000.
Squash	1993	250	12.00	3,000	TON	350.	1,050,000.
	1992	230	12.00	2,760	TON	300.	828,000.
Tomatoes Fresh	1993	275	14.00	3,850	TON	555.	2,137,000.
	1992	300	12.50	3,750	TON	540.	1,275,000.
Processed	1993	2,000	37.00	74,000	TON	48.	3,552,000.
	1992	1,700	45.00	76,500	TON	48.	3,672,000.
Cherry	1993	40	14.00	560	TON	340.	190,000.
	1992	50	14.00	700	TON	335.	235,000.

SANTA CLARA COUNTY
DEPARTMENT OF AGRICULTURE

VEGETABLE CROPS (CONTINUED)

ITEM	YEAR	HARVESTED ACREAGE	TONS PER ACRE	PRODUCTION TOTAL	UNIT	VALUE PER UNIT	TOTAL
Miscellaneous ²	1993	370					\$ 1,080,000.
	1992	375					880,000.
TOTAL	1993	11,960					\$ 72,842,000.
	1992	11,315					67,922,000.

¹Fresh only

²Parsley, Carrots, Leeks, Beets, Peas, Endive, Cardine, Anise, Pumpkins, etc.

FIELD CROPS

ITEM	YEAR	HARVESTED ACREAGE	TONS PER ACRE	PRODUCTION TOTAL	UNIT	VALUE PER UNIT	TOTAL
Barley	1993	---	---	---	TON	\$ ---	---
	1992	200	1.50	300	TON	113.	\$ 33,900.
Oats	1993	5,400	1.50	8,100	TON	90.	729,000.
	1992	5,400	2.00	10,800	TON	70.	756,000.
Hay Alfalfa	1993	---	---	---	TON	---	---
	1992	200	9.00	1,800	TON	145.	261,000.
Grain	1993	3,000	1.50	4,500	TON	85.	383,000.
	1992	8,000	1.50	12,000	TON	90.	1,080,000.
Safflower	1993	1,490	1.00	1,490	TON	310.	462,000.
	1992	1,155	.90	1,040	TON	300.	312,000.
Pasture Improved	1993	4,500			ACRE	50.	225,000.
	1992	4,500			ACRE	50.	225,000.
Irrigated	1993	2,500			ACRE	250.	625,000.
	1992	2,500			ACRE	250.	625,000.

SANTA CLARA COUNTY
DEPARTMENT OF AGRICULTURE

FIELD CROPS (CONTINUED)

ITEM	YEAR	HARVESTED ACREAGE	TONS PER ACRE	PRODUCTION TOTAL	UNIT	VALUE PER UNIT	TOTAL
Range	1993	215,000			ACRE	10.	\$ 2,150,000.
	1992	215,000			ACRE	10.	2,150,000.
Wheat	1993	3,800	1.50	5,700	TON	103.	587,000.
	1992	3,300	2.25	7,425	TON	125.	928,000.
Dry Beans	1993	-----	-----	-----	TON	-----	-----
	1992	725	1.00	725	TON	520.	377,000.
Sugar Beets	1993	210	35.00	7,350	TON	23.	169,000.
	1992	233	51.00	11,883	TON	31.	368,000.
Miscellaneous ¹	1993	420					385,000.
	1992	-----					-----
TOTAL	1993	236,320					\$ 5,715,000.
	1992	241,213					7,115,900.

Dry Beans, Barley, Hay, etc.

NURSERY CROPS - INDOOR AND OUTDOOR GROWN
PRODUCTION AREA

CROP	YEAR	HOUSE SQ. FT.	FIELD ACRES	SOLD BY PRODUCERS	UNIT	VALUE PER UNIT	TOTAL
Bedding Plants	1993	618,000	17.00	760,000	FLATS	VARIOUS	\$ 5,700,000.
	1992	650,000	18.00	800,000	FLATS	VARIOUS	6,000,000.
Christmas Trees	1993		380.00	76,000	TREE	\$ 30.00	2,280,000.
	1992		380.00	76,000	TREE	30.00	2,280,000.
Ornamental Trees Roses & Shrubs	1993	14,250	340.00	2,119,000	PLANT	VARIOUS	13,990,000.
	1992	15,000	360.00	2,230,000	PLANT	VARIOUS	14,725,000.

SANTA CLARA COUNTY
DEPARTMENT OF AGRICULTURE

NURSERY CROPS - INDOOR AND OUTDOOR GROWN
PRODUCTION AREA (CONTINUED)

CROP	YEAR	HOUSE SQ. FT.	FIELD ACRES	SOLD BY PRODUCERS	UNIT	VALUE PER UNIT	TOTAL
Miscellaneous ¹	1993	665,000	95.00				\$ 2,850,000.
	1992	700,000	100.00				3,000,000.
TOTAL	1993						\$ 24,820,000.
	1992						26,005,000.

¹Includes Indoor Decorative, Propagative Materials, Vegetable Plants & Herbaceous Perennials

SEED CROPS

CROP	YEAR	HARVEST ACREAGE	TOTAL
Vegetable and Flower	1993	1,000	\$ 2,310,000.
	1992	1,000	2,660,000.

SANTA CLARA COUNTY DEPT. OF AGRICULTURE FLORAL CROPS - CUT FLOWERS

CROP	YEAR	HOUSE SQ. FT.	FIELD ACRES	SOLD BY PRODUCERS	UNIT	VALUE PER UNIT	TOTAL
Asters	1993		50	20,000,000	BLOOM	\$ 0.08	\$ 1,600,000.
	1992		50	16,000,000	BLOOM	0.115	1,840,000.
Carnations Standard	1993	1,000,000		11,000,000	BLOOM	0.12	1,320,000.
	1992	1,715,800		18,868,000	BLOOM	0.15	2,830,000.
Miniature	1993	410,000		720,000	BUNCH	1.30	936,000.
	1992	510,000		896,000	BUNCH	1.60	1,434,000.
Roses - Hybrid	1993	790,000		12,690,000	BLOOM	0.24	3,046,000.
	1992	537,000		6,318,000	BLOOM	0.22	1,390,000.
Baby	1993	7,400		150,000	BLOOM	0.04	6,000.
	1992	7,400		148,000	BLOOM	0.05	7,400.
Chrysanthemums Standard	1993	7,400,000		20,000,000	BLOOM	0.20	\$ 4,000,000.
	1992	7,400,000		19,980,000	BLOOM	0.22	4,396,000.
Pompon	1993	7,500,000		4,200,000	BUNCH	0.85	3,570,000.
	1992	7,500,000		4,140,000	BUNCH	0.80	3,312,000.
Other Types	1993	9,000,000		21,350,000	BLOOM	0.17	3,630,000.
	1992	<u>9,000,000</u>		21,330,000	BLOOM	0.19 ¹	<u>4,136,000.</u>
Total	1993	23,900,000					11,200,000.
	1992	23,900,000					11,844,000.
Miscellaneous ²	1993						3,300,000.
	1992						3,290,000.
TOTAL	1993						\$ 21,408,000.
	1992						22,635,400.

¹Corrected figure

²Includes Agapanthus, Gypsophila, Iris, Statice, Yarrow, Turf, etc.

Biotic Resources Appendix

BIOTIC APPENDIX - RARE AND ENDANGERED SPECIES LAWS

Federal Endangered Species Act

The federal Endangered Species Act (ESA or the Act) was passed in 1973 and has since been amended and re-authorized. The Act provides a process for listing species as either "endangered" or "threatened" and methods of protecting listed species. The Act has several major sections, usually referred to by number. The three most significant sections of the Act are Sections 7, 9 and 10.

Section 7, which provides the most significant protection, requires that federal agencies and departments through their own actions must not jeopardize the continued existence of a listed species or its habitat. Under Section 7, agencies planning actions in an area used by an endangered or threatened species must consult with the U.S. Fish and Wildlife Service.

Section 9 prohibits the "take" of any federally listed endangered species. Take is defined by the Act as "... to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." Habitat of endangered species is also protected from destruction. Any person who violates this portion of the Act is subject to criminal penalties including fines and imprisonment.

If a Federal agency is not involved with the project, and federally listed species may be taken as part of the project, then an incidental take permit pursuant to Section 10(a) of the Act would need to be obtained. The Fish and Wildlife Service may issue such a permit upon completion of a satisfactory habitat conservation plan for the listed species that would be affected by the project.

Habitat Conservation Plans. A Habitat Conservation Plan (HCP) may be approved and an incidental taking permit (a Section 10(a) permit) may be issued only if reasonable alternatives to the taking are not available and certain conditions are satisfied:

- 1) the taking will be incidental to an otherwise lawful activity;
- 2) the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of the taking;
- 3) the applicant will ensure that adequate funding for the plan is provided; and
- 4) the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild.

HCPs can be prepared for individual properties or for fairly large regions that may involve numerous property owners. The requirements of an HCP include a description of impacts that would result from the proposed incidental taking, the geographic boundaries of the HCP, description of the species in the HCP, measures that will be taken to monitor and mitigate the proposed impacts, and funding available to undertake the measures.

The Act defines as "endangered" any species which is in danger of extinction throughout all or a significant portion of its range (other than certain species of insects). A "threatened" species

is any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Additional "species of concern" are divided into four further categories:

- a) Proposed for listing as Endangered or Threatened;
- b) Category 1 candidate species for which the U.S. Fish and Wildlife Service has sufficient biological information to support a proposal to list as Endangered or Threatened;
- c) Category 2 candidate species for which existing information indicated may warrant listing, but for which substantial biological information to support a proposed rule is lacking;
- d) Category 3 candidate species, former candidate species grouped into three subcategories:
 - (a) extinct;
 - (b) taxonomically invalid or not meeting the U.S. Fish and Wildlife Service's definition of a "species";
 - (c) too widespread or not threatened at this time.

California Endangered Species Act

The passage of the California Endangered Species Act (CESA) in 1984 gave California Department of Fish and Game (CDFG) a clearly defined responsibility to review proposed projects for impacts on California listed rare, threatened and endangered species. CESA defines California endangered species as those whose continued existence is jeopardized. California rare or threatened species, although not presently threatened with extinction, are in such small numbers throughout their range that they may become endangered if their environments change or deteriorate.

CESA established as policy that state agencies should not approve projects that would jeopardize listed species or cause the destruction or adverse modification of essential habitat for listed species.

CDFG is the state's trustee agency for endangered and threatened species under the California Environmental Quality Act (CEQA). Section 15065(a) of the CEQA Guidelines declares that impacts on rare or endangered plants or animals or their habitat are significant. "Rare or endangered" species are defined by CEQA as either on the state or federal rare, threatened or endangered list or may become endangered if the environment worsens or are likely to become endangered in the foreseeable future (CEQA Guidelines Section 15380). Therefore, a species does not have to have special status to be considered a significant impact under CEQA.

Noise Appendix

SANTA CLARA COUNTY NOISE CONTOUR DATA

Location	Date	Distance to CL (ft.)	Time	Measured Noise Levels, dBA			Distance to DNL Contour, ft.			
				L10	L50	Leg	70	65	60	55
1) Hwy. 152 west of Mt. Madonna Inn	2/23/94	30	5:00-6:00 p.m.	69	56	64	-	30	65	140
	"	"	6:00-7:00 p.m.	69	54	64				
	3/7/94	38	9:30-10:30 p.m.	61	39	57				
2) Hwy. 152 4 mi. east of Mt. Madonna.	3/8/94	30	5:30-6:30 p.m.	72	59	67	-	30	65	140
	"	"	6:30-7:30 p.m.	70	58	67				
	"	"	9:30-10:30 p.m.	59	43	55				
3) Highway 152 at Burchell Rd.	2/15/94	19	4:00-5:00 p.m.	77	63	72	-	49	106	228
	"	"	5:00-6:00 p.m.	75	60	71				
	"	"	10:00-11:00 p.m.	69	51	66				
4) Highway 152 at Hosclaw Rd.	3/8/94	60	2:00-3:00 p.m.	73	67	70	60	130	278	600
	"	"	3:00-4:00 p.m.	75	68	72				
	"	70	10:30-11:30 p.m.	65	48	63				
5) Highway 152 1/2 mi. east of Bloomfield Rd.	2/8/94	22	8:00-9:00 p.m.	74	56	70	55	119	257	553
	"	"	9:00-10:00 p.m.	72	55	70				
	"	"	10:00-11:00 p.m.	72	53	70				
6) Highway 152 4 mi. west of Casa de Fruta	3/8/94	34	1:30-2:30 p.m.	71	58	69	65	135	300	646
	"	"	2:30-3:30 p.m.	71	59	69				
	"	"	10:30-11:30 p.m.	69	47	66				
7) Hwy. 152 at San Felipe Rd.	2/8/94	30	4:00-5:00 p.m.	72	58	69	65	139	300	646
	"	"	5:00-6:00 p.m.	73	62	70				
	"	"	6:00-7:00 p.m.	71	58	68				
	"	"	7:00-8:00 p.m.	70	55	68				
	"	"	8:00-9:00 p.m.	69	54	68				
	"	"	9:00-10:00 p.m.	68	52	67				
	"	"	10:00-11:00 p.m.	67	51	67				
	"	"	11:00-12:00 m.n.	66	50	67				
	2/9/94	"	12:00-1:00 a.m.	66	50	67				
	"	"	1:00-2:00 a.m.	64	48	66				
	"	"	2:00-3:00 a.m.	67	50	69				
	"	"	3:00-4:00 a.m.	67	50	68				
	"	"	4:00-5:00 a.m.	71	55	70				
	"	"	5:00-6:00 a.m.	73	56	70				
	"	"	6:00-7:00 a.m.	75	60	72				
	"	"	7:00-8:00 a.m.	73	57	70				
	"	"	8:00-9:00 a.m.	72	56	70				
	"	"	10:00-11:00 a.m.	73	58	70				
	"	"	11:00-12:00 noon	73	58	70				
	"	"	12:00-1:00 p.m.	73	57	70				
	"	"	1:00-2:00 p.m.	73	58	70				
"	"	2:00-3:00 p.m.	72	58	69					
"	"	3:00-4:00 p.m.	73	58	70					
"	"	4:00-5:00 p.m.	72	58	69					

SANTA CLARA COUNTY NOISE CONTOUR DATA

Location	Date	Distance to CL. (ft.)	Time	Measured Noise Levels, dBA			Distance to DNL Contour, ft.			
				L10	L50	Leg	70	65	60	55
8) Hwy. 152 3 mi. east of Casa de Fruta	2/8/94	65	4:30-5:30 p.m.	79	59	75	88	190	410	884
	"	"	5:30-6:30 p.m.	78	69	74				
	"	"	6:30-7:30 p.m.	77	67	72				
	"	"	10:30-11:30 p.m.	66	49	64				
9) Santa Teresa Blvd. betw. Richmond Ave. Scheller Ave.	2/15/94	20	4:00-5:00 p.m.	69	58	67	-	27	59	126
	"	"	5:00-6:00 p.m.	69	60	65				
	3/8/94	"	12:00-1:00 a.m.	52	35	56				
10) Santa Teresa Blvd. betw. Madrone Ave. and Live Oak Ave.	2/15/94	20	5:00-6:00 p.m.	69	55	65	-	27	59	126
	"	"	6:00-7:00 p.m.	67	50	63				
	"	"	7:00-8:00 p.m.	63	48	61				
	"	"	8:00-9:00 p.m.	63	57	61				
	"	"	9:00-10:00 p.m.	58	45	59				
	"	"	10:00-11:00 p.m.	55	43	57				
	"	"	11:00-12:00 m.n.	51	38	54				
	2/16/94	"	12:00-1:00 a.m.	51	37	56				
	"	"	1:00-2:00 a.m.	46	34	50				
	"	"	2:00-3:00 a.m.	43	34	52				
	"	"	3:00-4:00 a.m.	43	35	52				
	"	"	4:00-5:00 a.m.	54	41	58				
	"	"	5:00-6:00 a.m.	64	48	64				
	"	"	6:00-7:00 a.m.	70	54	66				
	"	"	7:00-8:00 a.m.	71	56	66				
	"	"	8:00-9:00 a.m.	68	53	65				
	"	"	9:00-10:00 a.m.	66	52	63				
	"	"	10:00-11:00 a.m.	66	53	64				
	"	"	11:00-12:00 noon	67	52	64				
	"	"	12:00-1:00 p.m.	67	52	63				
	"	"	1:00-2:00 p.m.	68	52	64				
"	"	2:00-3:00 p.m.	70	56	65					
"	"	3:00-4:00 p.m.	69	56	66					
"	"	4:00-5:00 p.m.	70	57	65					
"	"	5:00-6:00 p.m.	70	59	66					

SANTA CLARA COUNTY NOISE CONTOUR DATA

Location	Date	Distance to CL (ft.)	Time	Measured Noise Levels, dBA			Distance to DNL Contour, ft.			
				L10	L50	Leg	70	65	60	55
11) Santa Teresa Blvd. south of Miller Ave.	2/23/94	21	3:30-4:30 p.m.	70	58	66	-	39	84	180
	"	"	4:30-5:30 p.m.	70	58	66				
	"	"	5:30-6:30 p.m.	67	55	63				
	"	"	6:30-7:30 p.m.	64	52	62				
	"	"	7:30-8:30 p.m.	64	50	62				
	"	"	8:30-9:30 p.m.	62	48	60				
	"	"	9:30-10:30 p.m.	56	41	56				
	"	"	10:30-11:30 p.m.	53	38	54				
	2/24/94	"	11:30-12:30 a.m.	45	37	51				
	"	"	12:30-1:30 a.m.	44	35	50				
	"	"	1:30-2:30 a.m.	45	38	49				
	"	"	2:30-3:30 a.m.	43	39	49				
	"	"	3:30-4:30 a.m.	53	41	55				
	"	"	4:30-5:30 a.m.	63	50	63				
	"	"	5:30-6:30 a.m.	68	56	66				
	"	"	6:30-7:30 a.m.	72	59	68				
	"	"	7:30-8:30 a.m.	71	57	66				
	"	"	8:30-9:30 a.m.	69	57	69				
	"	"	9:30-10:30 a.m.	68	55	65				
	"	"	10:30-11:30 a.m.	69	57	65				
	"	"	11:30-12:30 p.m.	69	56	66				
	"	"	12:30-1:30 p.m.	69	56	65				
	"	"	1:30-2:30 p.m.	69	56	66				
	"	"	2:30-3:30 p.m.	68	56	64				

SANTA CLARA COUNTY NOISE CONTOUR DATA

Location	Date	Distance to CL (ft.)	Time	Measured Noise Levels, dBA			Distance to DNL Contour, ft.			
				L10	L50	Leg	70	65	60	55
12) Monterey Rd. betw. California Ave. and Roosevelt Ave. w/ SPRR at 46 ft.	2/14/94	37	1:00-2:00 p.m.	69	60	67	-	68	147	317
	"	"	2:00-3:00 p.m.	70	60	66				
	"	"	3:00-4:00 p.m.	71	61	67				
	"	"	4:00-5:00 p.m.	70	61	67				
	"	"	5:00-6:00 p.m.	70	62	67				
	"	"	6:00-7:00 p.m.	70	60	66				
	"	"	7:00-8:00 p.m.	68	56	65				
	"	"	8:00-9:00 p.m.	66	54	63				
	"	"	9:00-10:00 p.m.	68	58	65				
	"	"	10:00-11:00 p.m.	63	47	67				
	"	"	11:00-12:00 m.n.	57	42	56				
	2/13/94	"	12:00-1:00 a.m.	53	43	55				
	"	"	1:00-2:00 a.m.	47	40	53				
	"	"	2:00-3:00 a.m.	45	40	51				
	"	"	3:00-4:00 a.m.	53	45	61				
	"	"	4:00-5:00 a.m.	54	43	65				
	"	"	5:00-6:00 a.m.	64	50	63				
	"	"	6:00-7:00 a.m.	69	55	67				
	"	"	7:00-8:00 a.m.	69	59	66				
	"	"	8:00-9:00 a.m.	69	58	66				
	"	"	9:00-10:00 a.m.	69	59	66				
"	"	10:00-11:00 a.m.	69	59	66					
"	"	11:00-12:00 noon	69	59	67					
"	"	12:00-1:00 p.m.	69	59	66					
"	"	1:00-2:00 p.m.	70	60	68					
13) Monterey Rd. betw. Cox Ave. and Highland Ave.	2/14/94	35	11:00-12:00 noon	73	64	69	48	103	221	476
	"	"	12:30-1:30 p.m.	75	65	70				
	"	"	2:30-3:30 p.m.	75	65	71				
	3/8/94	"	11:00-12:00 m.n.	58	46	55				
14) I-280 betw. Page Mill Rd. and El Monte Rd.	3/2/94	50	8:00-9:00 p.m.	73	66	70	146	315	680	1464
	"	"	9:00-10:00 p.m.	73	67	70				
	"	"	10:00-11:00 p.m.	72	64	68				
	"	"	11:00-12:00 m.n.	70	61	66				
	3/3/94	"	7:00-8:00 a.m.	78	74	76?				
	"	"	8:00-9:00 a.m.	76	71	73				
	"	"	9:00-10:00 a.m.	75	70	73				
"	"	10:00-11:00 a.m.	75	70	73					
15) I-280 betw. Grant Rd. and Magdalena Ave.	3/3/94	50	8:00-9:00 p.m.	75	69	71	92	199	429	924
	"	"	9:00-10:00 p.m.	76	70	72				
	"	"	10:00-11:00 p.m.	75	68	71				
	"	"	11:00-12:00 p.m.	73	63	69				
	3/4/94	"	8:00-9:00 a.m.	80	77	78				
	"	"	9:00-10:00 a.m.	79	75	77				
	"	"	10:00-11:00 a.m.	79	74	77				
"	"	11:00-12:00 noon	79	74	77					

SANTA CLARA COUNTY NOISE CONTOUR DATA

Location	Date	Distance to CL (ft.)	Time	Measured Noise Levels, dBA			Distance to DNL Contour, ft.				
				L10	L50	Leq	70	65	60	55	
16) Hwy 17 at Summit Rd. (Cty. Line)	3/7/94	70	10:00-11:00 a.m.	75	70	72	111	239	515	1109	
	"	"	12:30-1:30 p.m.	73	69	71					
	"	"	10:30-11:30 p.m.	69	64	66					
17) Hwy 17 1 mi. north of Summit Rd.	3/7/94	65	10:30-11:30 a.m.	72	67	70	65	140	302	650	
	"	"	11:30-12:30 p.m.	72	66	69					
	"	"	11:00-12:00 m.n.	65	56	62					
18) Hwy 17 at Holy City Rd.	3/7/94	65	11:00-12:00 noon	72	66	69	65	140	302	650	
	"	"	1:30-2:30 p.m.	73	67	71					
	"	"	12:00-1:00 a.m.	63	52	61					
19) Hwy. 17 1 mi. west of Bear Creek Rd.	3/3/94	42	12:00-1:00 p.m.	75	70	72	67	143	309	666	
	"	"	1:00-2:00 p.m.	75	70	72					
	"	"	11:30-12:30 a.m.	71	55	66					
20) Hwy. 17 at Bear Creek Rd.	2/2/94	45	11:30-12:30 p.m.	74	70	72	97	209	450	969	
	"	"	12:30-1:30 p.m.	75	70	72					
	"	"	1:30-2:30 p.m.	74	70	72					
	"	"	2:30-3:30 p.m.	75	71	72					
	"	"	3:30-4:30 p.m.	75	72	73					
	"	"	4:30-5:30 p.m.	75	73	73					
	"	"	5:30-6:30 p.m.	75	73	73					
	"	"	6:30-7:30 p.m.	75	72	72					
	"	"	7:30-8:30 p.m.	74	70	71					
	"	"	8:30-9:30 p.m.	73	68	70					
	"	"	9:30-10:30 p.m.	73	68	69					
	"	"	10:30-11:30 p.m.	71	55	70					
	"	2/4/94*	"	12:00-1:00 a.m.	70	58					65
	"	"	"	1:00-2:00 a.m.	66	46					62
	"	"	"	2:00-3:00 a.m.	65	43					62
	"	"	"	3:00-4:00 a.m.	66	45					64
	"	"	"	4:00-5:00 a.m.	68	53					65
	"	"	"	5:00-6:00 a.m.	73	66					69
	"	"	"	6:00-7:00 a.m.	75	71					72
	"	"	"	7:00-8:00 a.m.	76	72					73
	"	"	"	8:00-9:00 a.m.	76	73					73
"	"	"	9:00-10:00 a.m.	75	72	73					
"	"	"	10:00-11:00 a.m.	75	71	72					
"	"	"	11:00-12:00 noon	75	71	72					
21) Hwy. 17 at Montevina Rd.	3/3/94	40	11:00-12:00 noon	76	70	73	97	209	450	969	
	"	"	12:00-1:00 p.m.	76	71	74					
	"	"	10:30-11:30 p.m.	72	61	68					
22) Hwy 17 at "The Cats"	3/3/94	38	4:00-5:00 p.m.	71	66	69	97	209	450	969	
	"	"	5:00-6:00 p.m.	71	67	69					
	"	"	10:00-11:00 p.m.	72	64	68					

SANTA CLARA COUNTY NOISE CONTOUR DATA

<u>Location</u>	<u>Date</u>	<u>Distance to CL (ft.)</u>	<u>Time</u>	<u>Measured Noise Levels, dBA</u>			<u>Distance to DNL Contour, ft.</u>			
				<u>L10</u>	<u>L50</u>	<u>Leq</u>	<u>70</u>	<u>65</u>	<u>60</u>	<u>55</u>
23) U.S. 101 at Middle Ave. Overpass	3/7/94	130	3:00-4:00 p.m.	76	72	73	327	703	1516	326
	.	.	4:00-5:00 p.m.	77	73	74				
	.	.	1:30-2:30 a.m.	70	61	67				