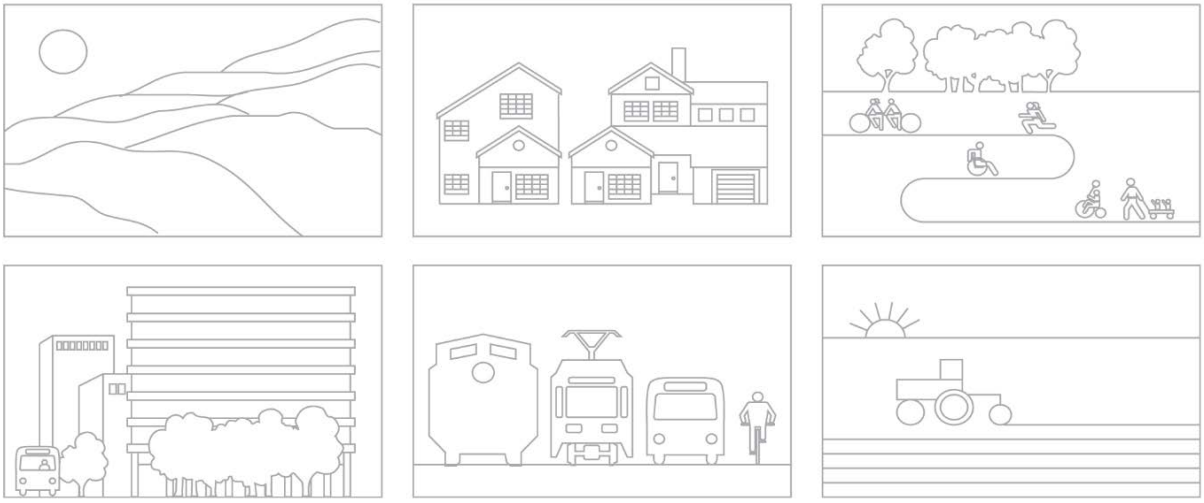
Book A

Santa Clara County
GENERAL PLAN



Charting a Course for Santa Clara County's Future: 1995-2010

COUNTY OF SANTA CLARA • PLANNING OFFICE • 70 WEST HEDDING STREET, SAN JOSE, CA 95110

ADOPTED: DECEMBER 20, 1994

Santa Clara County Board of Supervisors

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(See inside back cover for General Plan Review Advisory Committee and Staff Rosters)

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- Parks and Recreation
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Dedication

This plan is dedicated to the memories of Donald McGaffin and Ralph Brown.

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Introduction and Overview

Santa Clara County

General Plan

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USER'S GUIDE

Introduction and Overview

Organization of The Plan

The General Plan is organized into the following six parts:

1. Introduction and Overview
2. Countywide Issues and Policies
3. Rural Unincorporated Area Issues and Policies
4. Urban Unincorporated Area Issues and Policies
5. South County Joint Area Plan
6. Appendices

1. INTRODUCTION AND OVERVIEW

This section presents a brief overview of the basic themes of the General Plan, as well as the goals that comprise the vision upon which the Plan is based.

2. COUNTYWIDE ISSUES AND POLICIES

The nine chapters of this section of the Plan address from a "big picture," countywide perspective, the major challenges and opportunities facing Santa Clara County, particularly with regard to our future growth and development.

They address issues without regard to specific political boundaries and contain many policy recommendations that are proposed for adoption and implementation by the county's fifteen cities. (In reality, many of the basic policies of this Plan are already reflected in the cities' general plans).

Many of the broad, countywide strategies and general policies that relate to development and resource conservation in our rural areas contained in these chapters are addressed in greater detail in the chapters dealing with rural unincorporated area issues and policies.

3. RURAL UNINCORPORATED AREA ISSUES AND POLICIES

The seven chapters of the General Plan that address rural unincorporated area issues focus upon the roles which County government land use policies and regulations can play in achieving countywide urban development and resource management goals.

These chapters mirror, to a large degree, the strategies and policies of their countywide counterparts, although with greater emphasis upon the conservation of the natural resources and the maintenance of the rural character of the non-urban areas under the County's direct land use authority.

4. URBAN UNINCORPORATED AREA ISSUES AND POLICIES

The two brief chapters in this section of the Plan present strategies and policies applicable to the remaining pockets of unincorporated land within city urban service areas as well as Stanford University Lands.

5. SOUTH COUNTY JOINT AREA PLAN

This section of the Plan contains policies that have been jointly developed and adopted by the County and the Cities of Morgan Hill and Gilroy. These policies apply to both incorporated and unincorporated areas. In rural unincorporated areas, they supplement and, when they are more restrictive, supersede other policies of the Plan.

6. APPENDICES

The appendices of the Plan consist primarily of information required by state law, (Housing Element Update, Open Space "Action Program") but not containing policies. The chapter regarding "General Plan Administration" is a significant exception, in that it contains policies.

Reader Navigation Aids

To help readers "navigate" their way through the Plan and find the information needed, a number of visual "sign posts" have been incorporated in the General Plan documents.

- **CHAPTER ICONS**

  Each chapter has its own icon, which is repeated at the top of each page within the chapter, along with the chapter title and section.

- **CHAPTER SUBSECTIONS**

  Scenic Resources

  Within each chapter, major subsections are indicated by white subtitles presented against black box back- grounds.

- **STRATEGY ICONS**

➡	***Strategy #1: xxxxxx***

  Basic strategies of the Plan are indicated in boxes like the one above.

- **POLICY ICONS**

➔	***Policies and Implementation***

  Policies and implementation recommendations of the Plan are preceded by title boxes like the one above.

EXECUTIVE SUMMARY

Introduction and Overview

The Role of the Plan in Growth Management and Land Use

PROJECTED GROWTH FROM 1995 - 2010

Between 1995 and 2010, Santa Clara County's population is projected to grow by more than 206,000 people – an amount roughly equal to the current populations of Sunnyvale and Palo Alto combined. That will bring the county's population in 2010 to almost 1.8 million.

Unlike previous decades, however, when the county's growth came largely from in-migration from other areas of the United States and the world, most of our future growth during this period is projected to come from natural increase, i.e. births within our local population.

MANAGING GROWTH TO PROTECT QUALITY OF LIFE

How and where this future growth is accommodated will have a major impact on the overall quality of life in Santa Clara County, including the:

- Competitiveness of our local economy;
- Strength of our social fabric;
- Livability of our urban communities;
- Health of our natural environment
- Attractiveness and scenic beauty of our surrounding landscape; and
- Quality and efficiency of our local government services.

Consequently, we need to manage our future growth wisely in ways that will make it an asset rather than a detriment to our existing communities.

NEEDED: A VISION TO GUIDE OUR FUTURE GROWTH AND DEVELOPMENT

To manage growth wisely, we need to have a shared vision of the desired future we want to attain for ourselves, our children, and for future generations – and then direct our plans and actions toward achieving that vision.

The vision must seek to balance a wide array of community needs, objectives, and realities. It must combine both idealism and pragmatism – reflecting our highest aspirations, while taking into account the social, economic, political, geographic, and environmental realities we are likely to face as we approach and enter the 21st Century.

THE VISION OF THIS GENERAL PLAN

The vision of this General Plan is expressed through a series of goals organized under four basic and equally important themes:

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

These goals provide the overall direction for the strategies, policies, and implementing actions of this Plan.

Fundamental Issues, Strategies, and Policies

COMPACT DEVELOPMENT: A CORNERSTONE OF WISE GROWTH MANAGEMENT

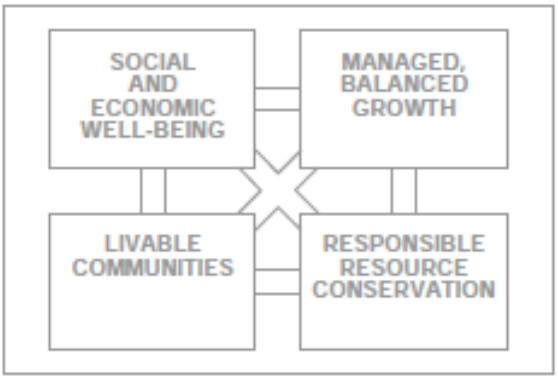
An important cornerstone of the General Plan's vision is that of "compact development" as an overall approach to managing our future growth. "Compact development" means that we should direct most of our future growth into appropriate locations within existing urban areas, particularly along transit corridors and closer to employment centers – rather than sprawling outward into the hillsides and the rural countryside.

By doing so, we can simultaneously achieve a number of important community objectives and goals of the vision, including:

- Directing public and private resources toward meeting the needs of our existing communities and neighborhoods;
- Reducing potential congestion on our roadways;
- Providing more affordable housing;

- Providing opportunities for lifestyles less dependent upon the automobile;
- Maintaining the scenic, rural character of our hillsides and other non-urban lands; and
- Improving air quality.

[See the Countywide "Growth & Development Chapter," Strategy 1: Promote Compact Development Patterns.]



DIVISION OF CITY AND COUNTY RESPONSIBILITIES WITH RESPECT TO URBAN DEVELOPMENT

The compact development policies in this Plan build upon the basic urban development policies that have been in effect in Santa Clara County since the early 1970's, when they were jointly adopted by the cities, the County, and the Local Agency Formation Commission (LAFCO).

Those policies contain an important differentiation of roles and responsibilities between the County and the fifteen cities with regard to urban development. They make the cities responsible for planning and providing services to urban development.

They also require the cities to plan for orderly urban development through the delineation of explicit "urban service areas (USAs)" indicating lands the cities are willing and able to provide with necessary urban services within the next 5 years. These urban service area boundaries are reviewed and adopted by the Local Agency Formation Commission (LAFCO), the agency responsible for preventing sprawl and encouraging the efficient provision of urban services.

While making the cities responsible for urban development, these policies also obligate the County not to allow urban development in unincorporated lands outside city urban service areas. This helps to maintain opportunities for eventual development of well-planned neighborhoods in areas needed and suitable for urban expansion when it is appropriate to do so. It also promotes the conservation of natural resources in the county's rural areas.

[For further elaboration, see the policies of the Rural Unincorporated Areas "Growth & Development Chapter," Strategy 1: Preserve Resources and Character of Rural Lands.]

KEEPING RURAL AREAS RURAL

Many of the policies in this Plan address land use issues involving the rural unincorporated areas of the county over which the County has direct land use authority. The overall direction of these policies is to maintain the scenic rural character of these areas and to promote conservation and productive use of their natural resources for agriculture, ranching, watershed, public recreation, and wildlife habitat.

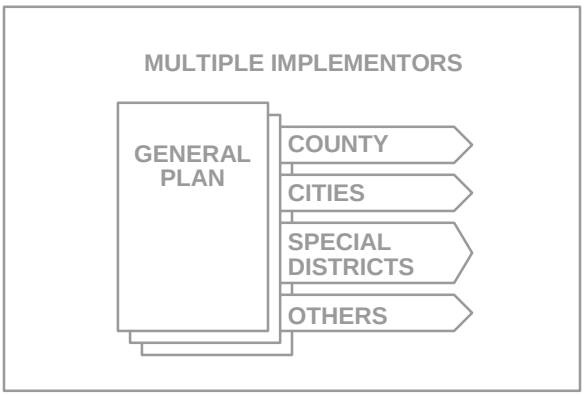
To carry out these policies, the County's General Plan land use designations and zoning ordinance regulations for these areas allow only non-urban land uses and development densities. Within most of these rural unincorporated areas, the average parcel size that can be created by new subdivisions is 20 acres or more.

[See the Rural Unincorporated Areas "Land Use Policies Chapter," policies R-LU 1-3; and to the "Growth & Development Chapter."]

EVENTUAL ANNEXATION OF URBAN UNINCORPORATED AREAS

The policies of the Plan state that unincorporated lands within city urban service areas should eventually be annexed to their surrounding cities. These policies are intended to:

- Eliminate the inefficiencies and confusion that result from provision of urban services to scattered unincorporated areas surrounded by cities; and



- Empower the residents of these areas to participate directly in the elections and decisions of the surrounding cities, whose decisions are most likely to impact them and whose services and facilities they are often already using or dependent upon.

The Plan acknowledges, however, that annexation of lands within some of the larger urban unincorporated areas may not occur for some time. In the meantime, to assure conformity of development within these areas with that of surrounding areas, development proposals within these areas must conform to the uses allowed in the surrounding city's general plan.

In addition, where unincorporated urban areas are in need of revitalization, the Plan proposes cooperative planning efforts that involve the residents and property owners of the area, the County, and the surrounding city.

[See the Urban Unincorporated Areas "General Land Use Management" Chapter.]

MULTIPLE IMPLEMENTORS OF THIS GENERAL PLAN

Although this document is, technically, the County's General Plan, it is not intended for implementation by the County alone.

Successful implementation of its policies will depend upon the voluntary, supportive actions of many different agencies – particularly the county's fifteen cities who are primarily responsible for development within the county's urban areas.

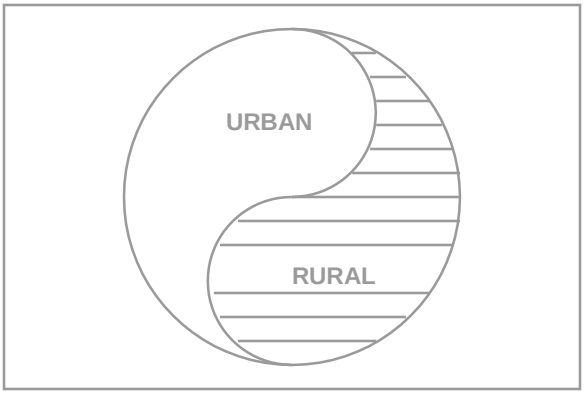
Although it is not legally required that the land use decisions of the cities conform to the County's General Plan, most of the county's cities have policies in their general plans that are very similar to those in this General Plan. Consequently, implementation of their own plans will also contribute to implementation of the County's General Plan.

Achieving the Plan's vision will also require supportive actions by local special districts and agencies (such as the Santa Clara Valley Water District, the Congestion Management Agency, the Midpeninsula Regional Open Space District, and the Santa Clara County Open Space Authority) as well as various regional, state, and federal agencies.

URBAN AND RURAL FUTURES ARE INTERRELATED

The General Plan recognizes that the future of the county's urban and rural areas are inseparable. Unless, for example, we provide for sufficient housing within existing urban areas affordable to households of all income levels, the pressures to build in the hillsides and in prime agricultural areas will only increase. Consequently, we must collectively devote as much attention and energy to developing livable urban communities within a framework of compact development, that meet the needs of our growing population, as we do to the preservation of the county's scenic open space lands.

Unless we focus on effective implementation of both the urban and the rural policies of this Plan, neither is likely to be fully successful.



THE VISION OF THE PLAN

Introduction and Overview

The Forces of Change

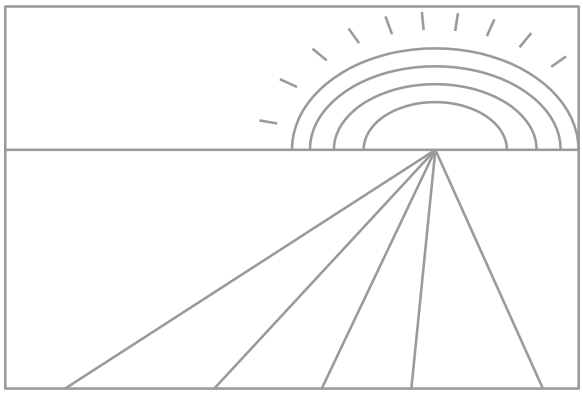
THE ONGOING TRANSFORMATION OF SANTA CLARA COUNTY

Dramatic changes have swept across the physical, social, and economic landscapes of Santa Clara County over the past several decades. From the bucolic "Valley of Heart's Delight" dominated by orchards and agriculture, the county has been transformed into dynamic "Silicon Valley," the world capital of high technology, with a population of 1.5 million people. As we move through the last decade of the 20th Century, Santa Clara County continues to be propelled rapidly ahead by forces of change that will continue to alter our physical, social, and economic landscapes.

MAJOR FORCES SHAPING THE COUNTY'S FUTURE GROWTH AND DEVELOPMENT

Many different forces will be influencing the shape of Santa Clara County's future growth and development. Among the forces that appear most likely to exert the greatest influence during the next decade are:

- Growth in the county's population, economy, and housing supply,
- Land economics, including not only the cost of land but also the public and private costs associated with land development,
- State and federal government mandates affecting local government planning and development decisions,
- Local government finance, which will affect not only the ability of local jurisdictions to accommodate additional growth, but also their willingness to accommodate it,
- Economic competition, technology, and the global economy, that will impact both where and how work is performed,
- Local land use plans establishing the basic framework within which growth and development can, or cannot, take place,
- Public attitudes, which provide the context for local government decision making.



The interaction of these and various other forces — sometimes reinforcing one another, sometimes acting in opposition to one another — will shape the public dialog and decision making processes affecting the county's physical growth and development over the next decade.

Visions and Plans: Tools for Managing Change

OUR ABILITY TO MANAGE CHANGE

The forces of change that will be shaping Santa Clara County's future are subject to varying degrees of local influence or control. In order to maximize our ability to manage these forces and affect future changes in the county so that they contribute to the overall well-being of the community, we need:

- An understanding of the major forces affecting our future,
- Shared visions of what we want our community to be like, and
- Plans and implementation programs for turning these visions into realities.

WHAT IS A VISION?

A simple definition of a vision might be: A statement articulating the best possible future based on an understanding of current reality and anticipated future change.

As such, a vision statement must combine idealism and pragmatism — it should express our highest hopes for what we want our community to become, while taking into account the realities of where we are and the directions we are currently going.

Vision statements can be expressed in a variety of different ways. For a business or a nonprofit organization, a vision can sometimes be expressed as a simple, one sentence statement of the organization's basic mission. For an older neighborhood in need of physical renewal, it might be expressed through a few drawings depicting what the area will look like after a neighborhood conservation and renewal plan is implemented.

For a community as large, diverse, and complex as Santa Clara County, however, articulating a single encompassing and compelling vision is more difficult due to the wide variety of conditions and aspirations that exist within our boundaries. This tends to force a choice between a vision which is either very brief and lacking in details or one that is very long and detailed. The vision of County's General Plan, seeks to strike a balance between these two extremes.

THE NEED FOR A COMPREHENSIVE, COUNTYWIDE VISION OF OUR DESIRED FUTURE

The character of our physical environment and the overall quality of life in Santa Clara County in the year 2000 and beyond will depend in large part upon the plans, policies, and decisions of our local governments regarding the amount, location, and nature of our future growth.

Many different plans are currently guiding the county's growth and development. These include the County's General Plan, the general plans of the fifteen cities, and a number of special purpose plans relating to individual specific topics such as transportation, congestion management, water supply, etc.

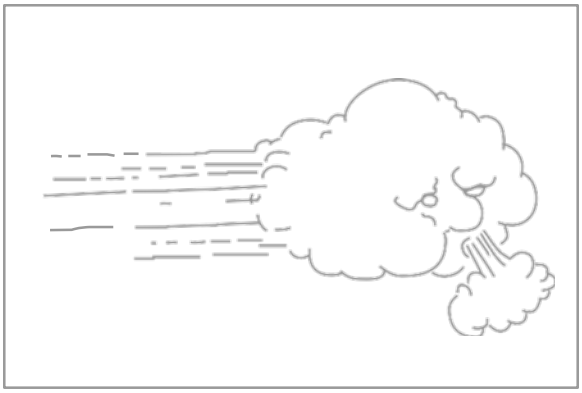
While each of these plans may have its own implicit or explicit vision statement with regard to its own individual geographic area or specific subject area, none clearly articulates a comprehensive, countywide vision of a desired future for Santa Clara County. In the absence of such a vision, there is no way to tell where we are headed or what kind of county will result from the implementation of these many separate plans. What is needed is a single, comprehensive countywide vision to bring coherence and clarity to the visions of these various individual plans.

THE ROLE OF THE COUNTY'S GENERAL PLAN

Of all the plans currently guiding Santa Clara County's growth and development, only the County's General Plan is both comprehensive in content and countywide in scope. Thus it is the most appropriate document for articulating the countywide vision that is needed to bring the unity of direction and action essential to maintain and enhance the overall quality of life in the county.

Although it is not legally-binding on the fifteen cities and other agencies whose actions affect our growth and development, the County's General Plan can still serve as a basic blueprint identifying the major components of the desired future we wish to attain for ourselves, our children, and for future generations.

Within the broad framework of this vision, local governments in Santa Clara County can work both individually and cooperatively to take the actions necessary to make the vision a reality.



Goals of The General Plan's Vision

ORGANIZATION OF THE GENERAL PLAN'S VISION

At its simplest level, the vision for the General Plan consists of four basic themes that encompass and articulate the fundamental policy directions of the Plan.

These four themes are:

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

Within each of these basic themes, the vision presents a series of goals that describe the general characteristics the Plan is seeking to achieve. These goals are expressed both through brief, descriptive titles and short paragraphs of text describing the physical environment and quality of life which the General Plan seeks to achieve.

This format attempts to balance comprehensiveness, manageability, and simplicity in a vision that is reflective of the scope and basic policies of the Plan and yet succinct and simple enough to be memorable. It is a vision painted in broad, basic strokes rather than specific details. More details of the vision are presented within the policies and text of individual chapters of the Plan.

Goals for Social and Economic Well-Being

1. Equality of Opportunity and Respect for Diversity

1.1 A community where all individuals are encouraged and enabled to achieve their maximum potential.

1.2 Equality of opportunity for all persons to obtain housing and employment regardless of race, ethnicity, gender, or sexual orientation.

1.3 Tolerance and mutual respect for cultural, diversity and different lifestyles.

2. A Healthy, Diverse Economy and Adequate Employment Opportunities

2.1 A sound and diversified local economy capable of providing meaningful employment opportunities and adequate self-support for all employable county residents.

2.2 Sustainable levels of economic growth and job formation consistent with planned improvements in housing, transportation, urban services and maintenance of environmental quality.

2.3 A quality of life that contributes to the economic attractiveness and vitality of this area.

2.4 A regulatory environment and tax structure that efficiently and effectively accomplishes desired public objectives while maintaining the economic competitiveness of local businesses.

3. Educational Excellence

3.1 An educational system capable of:
- a. Enabling individuals to develop their abilities, skills, and knowledge to full potential;
- b. Enhancing each individual's sense of personal fulfillment and creativity; and
- c. Enhancing the region's economic competitiveness through the development of a capable, skilled work force.

3.2 An educated, informed population capable of participating in government and democratic processes.

4. Community Participation in Decision Making

4.1 Government processes and decision making that are open to public review and participation.

4.2 Broad public awareness and participation in planning and decision making affecting the development and conservation of the county's physical environment.

5. Sense of Belonging and Contribution to Community

5.1 An environment in which each individual can develop a sense of belonging within a group or community life that is to the benefit of the individual's sense of fulfillment and to the overall welfare of the community.

5.2 Culturally and economically balanced, integrated communities.

6. Well-Functioning Families

6.1 Stable, healthy, well-functioning families.

7. Personal Safety and Security

7.1 A community environment that promotes a sense of personal safety and security.

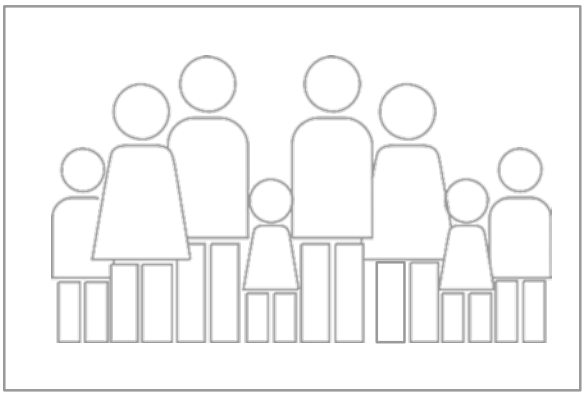
8. Support for Those with Special Needs

8.1 Persons unable to care fully for themselves are assisted in meeting their personal and social needs. Children and adults vulnerable to neglect, abuse, and exploitation protected and given appropriate care and assistance.

9. Adequate, Accessible Health Care and Social Services

9.1 An efficient system of health care delivery accessible and affordable to all.

9.2 A social services delivery system:
- a. Emphasizing preventative programs;
- b. Capable of reducing dependency among those in need; and
- c. Conducive to optimal social and personal functioning of families and individuals.



Goals for Managed, Balanced Growth

1. Coordinated Countywide Planning and Cooperative Plan Implementation

1.1 Local planning and implementation that is consistent with a framework of integrated countywide plans and policies aimed at meeting the needs of current and future county residents and protecting environmental resources. Local plans and policies that take into account regional and state goals, plans and policies.

2. Balanced Development

2.1 A balance achieved and maintained between:
- a. The amount of employment and the amount of housing;
- b. The cost of housing and the incomes of workers and other households; and
- c. The amount of growth, the available water supply, and the capacity of infrastructure, including sewer and transportation facilities.

2.2 A mix and location of employment, housing, and transportation services that:
- a. Enables convenient commuting;
- b. Provides easy access to goods and services;
- c. Reduces need for reliance on an automobile; and
- d. Promotes public transit and pedestrian and bicycle mobility.

3. Planned, Orderly Urban Expansion

3.1 Expansion of the urban area only when it occurs in a logical, orderly, and efficient manner, consistent with countywide plans and policies and the ability of local agencies to anticipate and provide necessary urban services and facilities in a cost-effective manner.

3.2 Establishment of long term urban growth boundaries clearly delineating urban from non-urban areas.

4. Urban Development Appropriately Located

4.1 Urban development located only where it will not:
- a. Endanger public health and safety,
- b. Deplete natural resources, and
- c. Diminish the natural beauty of the county's physical setting.

4.2 Urban development only within city urban service areas.

5. Rural Development Appropriate to Rural Areas

5.1 Development in rural areas which:
- a. Is consistent with maintenance of the rural character and the preservation of natural beauty.
- b. Assures the long term conservation of natural resources, including soils, minerals, water resources, wildlife, and plant communities.
- c. Minimizes human exposure to potential safety and health risks and minimizes potential damage to property.
- d. Minimizes the need for the provision and maintenance of government services and facilities.

6. Compact, Transportation-Efficient Urban Development

6.1 Compact urban development patterns that reduce the need for long distance commuting and can be served efficiently by public transportation.

6.2 Long term economic viability of agriculture enhanced.

Goals for Livable Communities

1. Adequate and Affordable Housing

1.1 An adequate supply of decent, affordable, and appropriately located housing designed to meet the varied lifestyles and income levels of the county's diverse households.

2. Convenient Transportation

2.1 An integrated, fully accessible, and balanced transportation system that allows for the convenient and efficient movement of people and goods and reduces dependency upon the automobile.

3. Accessible Parks and Public Open Space

3.1 An adequate system of uncrowded regional parks and public open space lands that is readily accessible to county residents and workers. An extensive countywide network of recreational hiking, bicycling and equestrian trails, and pathways linking and providing access to these public lands.

3.2 Sufficient urban open space and parks to provide opportunities for intensive recreation, leisure activities, and scenic enhancement of urbanized areas.

4. Cultural and Recreational Amenities

4.1 An array of opportunities for cultural and recreational activities reflecting the diversity of cultural interests, lifestyles, and leisure pursuits of the population.

5. Efficient and Adequate Urban Services

5.1 All urbanized areas provided efficiently with necessary urban services and facilities.

5.2 Optimal and efficient use of all new and existing infrastructure.

5.3 Adequate and timely maintenance of urban infrastructure.

6. Attractive Communities Enhanced by Their Natural Surroundings

6.1 Well-planned, attractive communities enhanced by the beauty of their natural settings. Areas of natural diversity and beauty such as mountains, hillsides, meadows, water areas, forests, and baylands permanently protected as open space and/or greenbelts.

7. Safety from Natural and Other Hazards

7.1 Human life and property protected from the dangers of natural hazards, such as flood, seismic, geologic, and fire hazards.

7.2 Human life and property protected from exposure to man-made hazards, such as unhealthy noise levels, hazardous wastes and materials, aviation accidents, and unsafe structures.

Goals for Responsible Resource Conservation

1. 1. A Healthy, Well-Functioning Natural Environment

1.1 Natural environmental resources such as wildlife, vegetation, soils, air, water and minerals permanently protected and managed for their functional and ecological values.

1.2 Natural diversity preserved and restored for its inherent ecological value.

2. Healthful Air Quality

2.1 Clean air that:

a. Meets human health standards set forth in state and federal law;

b. Protects environmental resources, including flora and fauna vulnerable to poor air quality;

c. Enhances overall quality of life and the aesthetic appreciation of the area's natural beauty; and

d. Maintains the attractiveness of the area to economic development.

3. Water Supply Resources Conserved and Protected

3.1 An adequate supply of high quality water to meet domestic and economic needs.

3.2 Water resources used efficiently and protected from contamination, particularly water supply watersheds and ground water aquifers.

4. Special Water Environments Protected and Restored

4.1 Healthy, well-functioning creek, streamside, Bay, and Bay wetlands ecosystems capable of providing:

a. Stable wildlife habitat, corridors linking habitat areas, and protection for endangered species;

b. Passive recreational and interpretive nature study; and

c. Aesthetic enhancement of urban and rural settings.

4.2 Restoration, where possible, of degraded special water environments.

5. Heritage Resources Protected

5.1 Protection and preservation of heritage resources both natural (e.g. heritage trees; and paleontological resources) and cultural (e.g. historic sites and structures, and archeological sites). Cultural heritage resources reflecting the contributions to society of all cultures acknowledged, preserved and commemorated.

6. Productive Agriculture

6.1 Areas of prime agricultural soils retained in productive agricultural use.

7. Mineral Resources Conserved and Responsibly Extracted

7.1 High priority mineral resources protected from urban encroachment and urban development. Mineral resources extracted in an environmentally responsible manner. Depleted mineral extraction sites reclaimed and rehabilitated.

8. Energy Resources Conserved

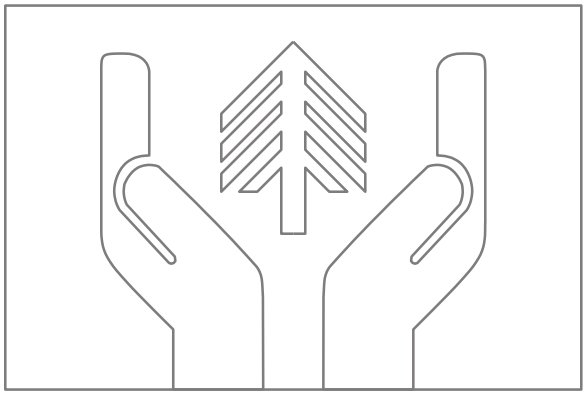
8.1 Sufficient energy supplies available at a reasonable price to meet basic needs. Land use patterns, transportation systems, building design, and building construction which minimize energy consumption. Maximum application of renewable energy resources.

9. Solid Waste Effectively Managed

9.1 Economical and dependable collection and processing of solid wastes in a manner that safeguards the health of the public and provides maximum protection of the environment.

9.2 Solid waste requiring landfill disposal minimized, including residential, commercial, and industrial wastes.

9.3 Long term landfill capacity is available to meet anticipated local disposal needs.



A Preview of Santa Clara County's Future

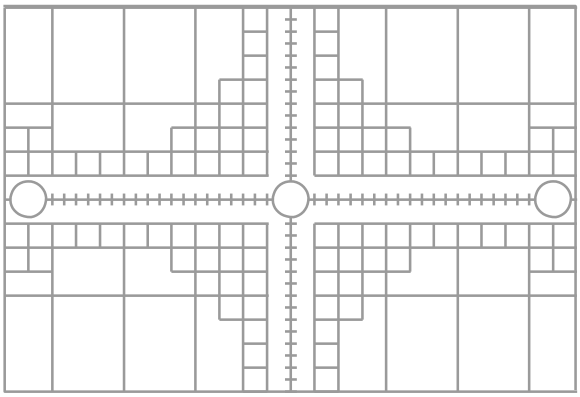
As it continues to grow, Santa Clara County will continue to change. The vision of this Plan seeks to direct our future growth toward locations in the county where the changes it brings will maintain and improve the overall quality of life in Santa Clara County. It will do so by enhancing existing neighborhoods and communities, contributing to the solution of countywide problems, and creating new lifestyle options to meet the diverse and changing needs of the county's households.

The following section contains a brief overview of what Santa Clara County would be like in approximately 2010 if the goals of the General Plan's vision are actively pursued and the General Plan's policies are implemented.

CHARACTERISTICS OF THE PHYSICAL ENVIRONMENT

■ Growth Accommodated Through Infill Development

Most of the county's growth will be accommodated through infill development within existing urban areas to achieve more compact development patterns. Consequently, the amount of land dedicated to urban uses will be essentially the same as it is today.



■ Creation And Revitalization Of Urban Centers

Existing downtowns and various other locations along major transit corridors will become focal points for higher density, mixed use development that will give them a more urban, pedestrian-oriented character. These new urban centers will incorporate innovative design concepts that combine a mix of uses including housing, employment, shops, services, civic functions, recreation, and entertainment. They will provide attractive new lifestyle options for a wide variety of household types and incomes.

■ Vitality Of Neighborhoods And Communities Enhanced

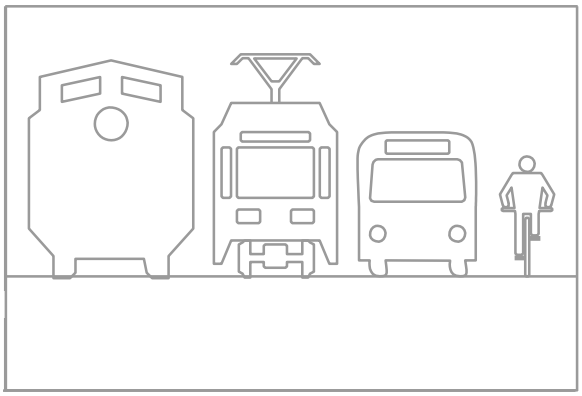
Existing neighborhoods will be more livable and safe through provision of better urban services and amenities.

■ A Diverse, High Quality Housing Supply

Most residential neighborhoods will retain their predominantly single-family, low density character. New, somewhat higher density neighborhoods will be created in appropriate areas adjacent to transit lines and commercial areas. This higher density housing will offer residents attractive and more affordable alternatives to the single family house. Although these new townhomes and apartments will bring increased balance and affordability to the county's housing supply, detached single family homes will remain the predominant housing type.

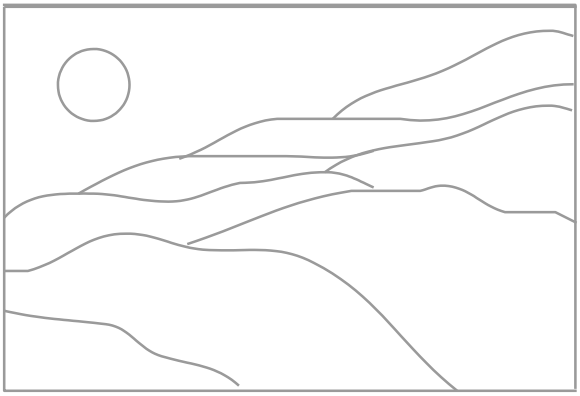
■ More Alternatives To The Automobile

Opportunities for county residents to enjoy lifestyles that are less dependent on the automobile will be increased. This will be made possible through a combination of transit system improvements, higher density, mixed use development projects along transit corridors, development of more affordable housing closer to employment centers, and an increase in pedestrian and bicycle facilities.



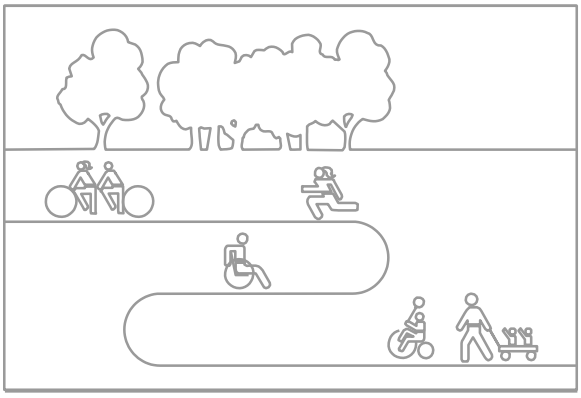
■ Hillsides And Other Rural Lands Maintained In Open Space

The county's hillsides, ranchlands, and other rural areas will remain in their natural, undeveloped state or in low density uses consistent with the preservation of their scenic rural character.



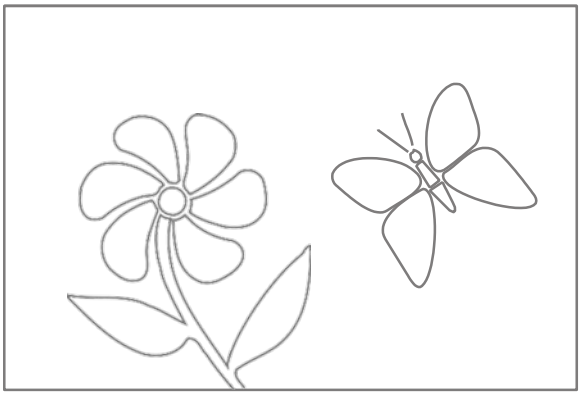
■ Interconnected System Of Parks, T Rails, And Other Public Open Space L Ands

An extensive, interconnected system of parks, trails, and other public open space lands will provide a diversity of recreational settings and opportunities for county residents, while providing environmental and aesthetic benefits as well. Linear streamside park chains along major creeks passing through the urban area will help meet urban recreation needs as well as provide pathways for non-vehicular access to nearby baylands and foothill parks.



■ A Cleaner, Healthier Environment

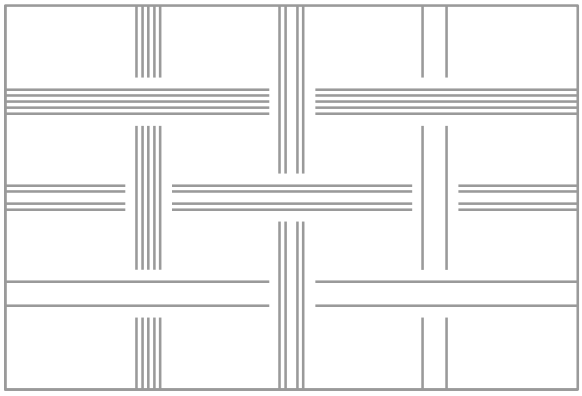
The county's air and water quality will be improved, as will the health, diversity, and viability of the county's natural communities.



CHARACTERISTICS OF THE SOCIAL AND ECONOMIC ENVIRONMENTS

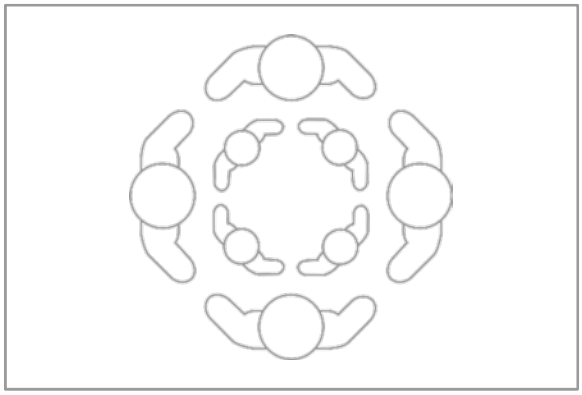
■ Appreciation For Diversity

Santa Clara County will have a climate of tolerance and respect for diversity.



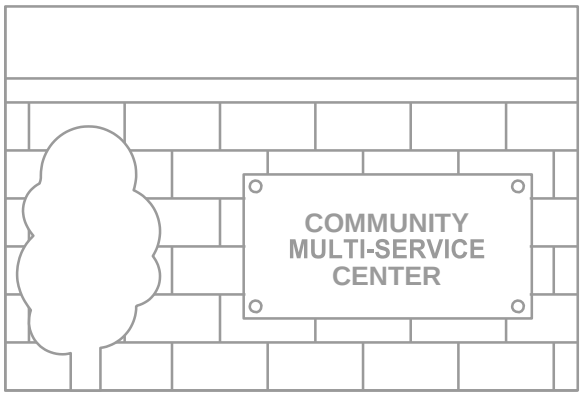
■ A Strong Sense Of Community, Belonging, And Empowerment

All residents of our county will feel that they are integral members of a broader community and will be involved in activities to contribute to its betterment. Local governments will be responsive to the needs and desires of the community.



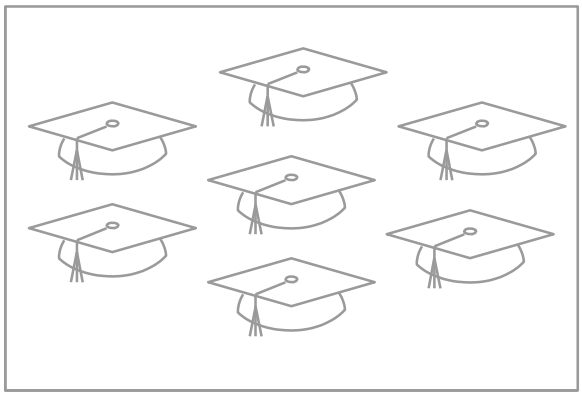
■ Accessible Community Services

Accessibility to vital public health services — medical, dental, and psychological — as well as to dependent care, employment and other community services will be significantly improved. More of these services will be available at school sites, within compact, mixed use developments, and at major transit nodes.



■ Innovative, Effective Education And Employment T Raining

Schools will be responsible to their communities' needs and capable of providing equality of opportunity to a diversifying population and training for employment in a rapidly changing economy. Employers will be actively engaged in job training and retraining programs to contribute to the lifelong learning needs of the community's workforce.



■ A Supportive Climate For Business And A Healthy Local Economy

Local governments, business, and community organizations will be working together as partners to maintain the health and competitiveness of the local economy.

IMPLEMENTING THE VISION

Achieving the vision of this Plan can strengthen our local economy, improve the health of our environment, and contribute to the durability and flexibility of our social fabric. The chapters in the remainder of this Plan spell out the basic strategies and policies that are intended to implement this vision.

COUNTY PROFILE

Introduction and Overview

Physical Environment

REGIONAL SETTING

Santa Clara County encompasses 1,300 square miles and is located at the southern end of San Francisco Bay. Its 1990 population of 1.5 million is the largest of the nine Bay Area counties and constitutes about one fourth of the Bay Area's total population. The county is a major employment center for the region, providing more than a quarter of all jobs in the Bay Area.

COUNTY DESCRIPTION

Santa Clara County is unique because of its combination of physical attractiveness and economic diversity. With its numerous natural amenities and one of the highest standards of living in the country, the county has long been considered one of the best areas in the United States in which to live and work. Santa Clara County continues to attract people from all over the world.

NATURAL ENVIRONMENT

The major topographical features of the county include the Santa Clara Valley, the Diablo Range to the east, and Santa Cruz Mountains to the west. The fertile Santa Clara Valley is ringed by rolling hills and runs the entire length of the county from north to south. The Diablo Range covers the entire eastern half of the county. It consists mainly of grasslands, brush and oak savannah, due mostly to sparse rainfall. The Santa Cruz Mountains contain rolling grasslands and oak-studded foothills adjacent to the valley, while mixed hardwoods and dense evergreen forests predominate in the higher elevations west. Steep slopes, active earthquake faults, and areas of geologic instability are prevalent in both mountain ranges.

The Baylands lie in the northwestern part of the county, adjacent to the waters of the southern San Francisco Bay. They consist mostly of vast salt evaporation ponds and remnant areas of salt marsh and wetlands.

The Mediterranean climate of the region remains temperate year round due to the area's geography and its proximity to the Pacific Ocean. Warm and dry through most of late spring, summer, and early fall, the county's precipitation ranges from an average of 12 inches per year in downtown San Jose to over 60 inches per year in parts of the Santa Cruz mountains.

BUILT ENVIRONMENT

The North Valley is extensively urbanized, housing approximately 90 percent of the county's residents. Thirteen of the county's fifteen cities are located in the North Valley, while the remaining two cities, Gilroy and Morgan Hill, are located in the South Valley. The South Valley differs in that it remains predominantly rural, with the exception of Gilroy, Morgan Hill, and the small unincorporated community of San Martin. Low density residential developments are also scattered through the valleys and foothill areas.

Social & Economic Characteristics

POPULATION GROWTH

Growth in the county's population is expected to continue, but at slower rates than in the past. By 2010, the population of the county should reach an estimated 1.8+ million persons, nearly 315,000 more than in 1990. Annual growth rates during that period will range from 12,000 to 22,000 persons per year. These figures contrast sharply with the growth experienced in the 1950s and 1960s, when the population grew between 40,000 to 60,000 persons per year. More moderate rates of employment growth and housing development account for the slower rates of growth.

The percentage of population growth from in-migration has steadily declined since the early 1970s, whereas between 1950 and 1970, in-migration had been the predominant source of population growth. Levels of in-migration ranged from 11,000 persons in 1950 to a peak of 46,000 persons in 1960, making up 79 percent of the population growth for the county that year. In contrast, recent years have seen a net out-migration, particularly for young families.

LOCATION OF POPULATION GROWTH

Most of the growth in Santa Clara County's population is expected to occur in San Jose and to a somewhat lesser extent, in the South County, while the North and West Valley cities are expected to experience relatively little population growth.

HOUSEHOLD AND DEMOGRAPHIC CHARACTERISTICS

The number of households in Santa Clara County will increase from 520,180 in 1990 to approximately 629,600 in 2010. Household characteristics are expected to change with changes in the overall demography of the county. The percentage of whites will decline, from about 58 percent in 1990 to 51 percent by the year 2005, while the proportion of Latinos and Asians will increase.

Currently, Latinos comprise about 21 percent of the county's population; by the year 2005, the proportion of Latinos is expected to increase to 25 percent. Likewise, the proportion of Asians is expected to increase from about 17 percent in 1990 to 21 percent by 2005. The proportion of Blacks, on the other hand, is expected to remain about the same, declining slightly from 4 percent in 1990 to 3 percent in 2005.

Other prominent aspects of change include higher population per household, an increasing number of non-white youth, and a larger senior population. The number of persons per household increased from 2.76 in 1980 to 2.81 in 1990, and it is expected to increase further to 2.85 by 2005.

Regarding youth populations, Latinos and Asians will make up an increasing proportion of the younger age groups. In 1990, for example, Latinos made up over 29 percent of those under age 20.

Finally, the percentage of seniors over 65 is expected to increase from approximately 8.7 percent of total 1990 population to 11.9 percent by 2005. These demographic changes will result in an increasing diversity of household types, with a significant impact on the types of services and housing needed in Santa Clara County in the coming years.

ECONOMIC CHARACTERISTICS

The economy of Santa Clara County remains the strongest economy in the Bay Area and one of the strongest in the nation, despite some loss in manufacturing, attracting large amounts of American and foreign investment. The number of jobs the county will have in 2010 is estimated at 1,046,360, up from approximately 864,110 in 1990. The region's economy should continue to grow and diversify in the coming years. High technology industries will fuel most of the county's employment growth during the 1990s and beyond.

Growing specialization in the areas of research, development, and automated production will increase demand for highly educated and skilled professional workers for high tech industries. Higher demands will be placed on the education system overall as a consequence. The prestigious universities of the region have and will continue to play a major role in the region's economy.

Another significant trend in the county's economy is the change in the location of employment away from previous major employment centers. As the northwestern cities have approached buildout, new job growth has shifted southward into Santa Clara and San Jose and eastward toward Milpitas and southern Alameda County.

Santa Clara County Projections, 1990 -2010

	1990	1995	2000	2005	2010
Population	1,497,577	1,606,600	1,689,600	1,770,600	1,813,100
Households	520,180	543,570	576,010	606,150	629,600
Pop. per Household	2.81	2.89	2.87	2.85	2.81
Jobs	864,110	819,260	899,450	992,850	1,046,360
Employed Residents	812,345	784,100	869,600	917,500	967,900
Avg. HH Income	$62,439	$60,600	$66,500	$72,600	$79,600

Source: ABAG, *Projections '94* (Association of Bay Area Governments, Dec. 1993)

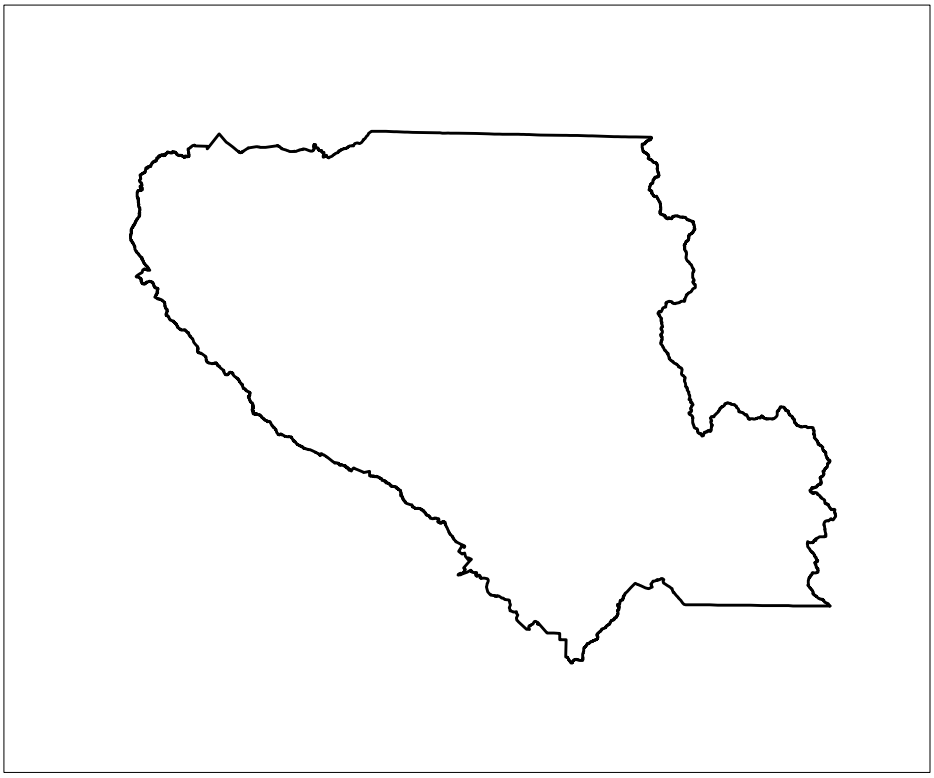
Average household income in the county is also expected to rise in the coming years, to $72,600 by 2005 (in 1990 dollars), compared to $62,439 in 1990. The increase reflects rising wages, a growing percentage of high-income wage earners in their 40s and 50s, more workers per household, and a decreasing percentage of entry-level, low-wage workers. Marked disparities remain between cities for average income, from a low of $43,900 to a high of $120,400 in 1990.

GOVERNMENTAL JURISDICTION

Santa Clara County contains 15 cities and roughly 30 special districts. The City of San Jose contains approximately half of the county's total population. Given the cities' and County's joint urban development policies, the cities are collectively responsible for accommodating and managing urban development, as well as for the provision of most urban services. Lands outside cities' Urban Service Areas and under County jurisdiction are maintained in rural uses

Part 2:

Countywide Issues & Policies



Santa Clara County

General Plan

Growth & Development

Countywide Issues and Policies

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Strategies, Policies and Implementation B-3

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Sub-Strategy A: Manage Urban Expansion B-5

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Strategy #3: Improve Coordinated, Countywide Planning.....B-24

Summary

CHALLENGES TO MANAGING URBAN GROWTH

Perhaps the pre-eminent challenge facing Santa Clara County as a whole over the next decade and into the 21st century will be successfully managing and accommodating urban growth. Problems of traffic congestion, housing supply and affordability, and many others are intrinsically related to the most fundamental policies and decisions to be made concerning the amount, rate, location and patterns of urban growth.

The following points provide an overview of conditions as we enter the 1990s:

- Santa Clara County will continue to grow in population and employment through the 1990s, although at lower rates than in recent decades.
- The overall quality of life in the county will be significantly affected, for better or worse, depending upon how and where future growth is accommodated.
- For a variety of reasons, most of the county's future growth should be accommodated within existing urban areas, rather than by expanding into non-urban areas.
- Through the strategies and policies for managed, balanced growth, Santa Clara County can provide a better balance of urban land uses, more affordable housing, an improved overall transportation system, and enhanced livability of our communities.

STRATEGIES FOR ACCOMMODATING FUTURE URBAN GROWTH

On a countywide scale, this Plan proposes a three-part strategy for managing and accommodating urban growth. That overall growth management strategy includes the following concepts, or "strategies," which form the outline of sections within this chapter:

Strategy #1: Promote Compact Urban Development Patterns

Sub-strategies:

A) Manage Urban Expansion

B) Make More Efficient Use of Existing Urban Areas

Strategy #2: Achieve More Balanced Urban Growth and Development

Strategy #3: Improve Coordinated, Countywide Planning

These strategies are based in part on Santa Clara County's past experience with rapid, uncontrolled urban growth and its quality of life impacts. They reflect the principles of balanced growth and sustainable economic development. The strategy for urban growth management articulated in this chapter recognizes the value of a growing, diversifying economy and population, but also the need to accommodate that growth without sacrificing overall quality of life. Overall quality of life need not be compromised by growth if that growth is well managed.

In this regard, the strategies and policies of this chapter are designed to promote the goals contained within the theme of Managed, Balanced Growth of the Vision Statement of this General Plan. Directly or indirectly, nearly every goal for the future of Santa Clara County expressed within the Vision Statement is related in some way to our ability to manage and accommodate urban growth. Whether one is concerned with the fiscal condition of our local governments, with open space preservation, retaining agricultural lands, housing affordability, traffic congestion, or a variety of other important concerns, the prospects for improvement are diminished in the absence of effective strategies for managing and accommodating growth.

Background

OVERVIEW OF URBAN DEVELOPMENT, 1950-1990

Since the 1950s, Santa Clara County has been one of the fastest growing metropolitan areas in the country. Population more than doubled from 290,000 in 1950 to over 640,000 in 1960, and nearly doubled again by 1970 (1,065,500). The benefits of rapid economic growth have been many: generally higher standards of living, and greater influence and prestige in the region, state and world.

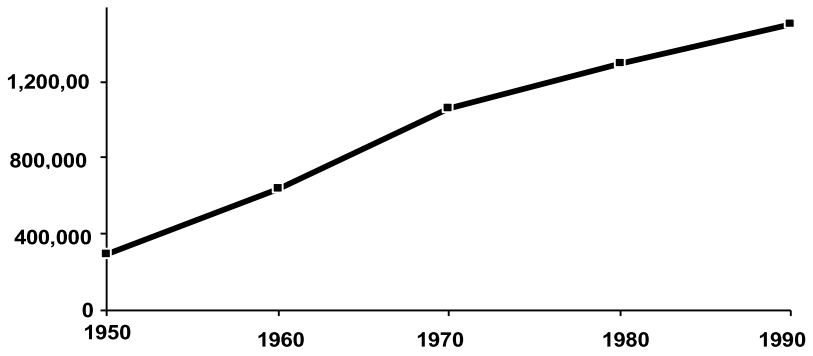
As population and employment rose, cities typically grew at their fringes. In the North Valley, agricultural lands were converted to housing and commercial development until most of the open space between cities was developed at low suburban densities. Employment growth in the semiconductor and computer manufacturing industries centered in the northwest, along the Silicon Valley corridor, as housing development expanded southward. With seemingly ample supplies of easily developable lands there seemed no overriding reason to constrain expansion of the urban areas at low densities. Population growth and economic diversity seemed especially important to Santa Clara County, which had been a predominantly agricultural economy somewhat overshadowed in the region by other metropolitan areas.

PATTERNS OF URBAN SPRAWL

The automobile facilitated decentralization of development, aspects of which are often disparaged as "urban sprawl." In Santa Clara County, much urban expansion followed no logical sequence or pattern. The northern valley in particular gained national notoriety as a textbook example of unmanaged, leapfrogging development and sprawl.

The causes of this outcome are understandable if not justifiable. The cities and the County each promoted urban development in order to augment the local tax base and exert territorial control. Lacking effective controls on urban expansion, all jurisdictions competed against each other for development, resulting in "annexation wars." Other factors include the basic economics of land supply. The costs of undeveloped land tend to decrease as distance from the urban center increases, providing an incentive for development to leapfrog over urbanized areas into distant undeveloped areas despite the availability of existing undeveloped lands closer to the center.

Santa Clara County Population,



THE 1973 URBAN DEVELOPMENT/OPEN SPACE (UD/OS) PLAN

In response to the haphazard, uncoordinated urban growth of the 1950s and 60s, in the early 1970s the County and the cities developed a basic framework of policies to manage future urban expansion. This system was defined in the Urban Development/Open Space Plan (UD/OS) adopted by the County and the cities in 1973, and subsequently incorporated within the guidelines and policies of the Santa Clara County LAFCO.

The central concept of the policy framework established in this jointly adopted plan was that future urban expansion take place on a staged, orderly basis only under cities' jurisdiction, and that the County no longer allow urban development under its jurisdiction. The plan explicitly rejected the prospect of continued and indefinite expansion of urban development into hillsides and the remaining valley agricultural lands.

That policy framework remains as a cornerstone of LAFCO and County General Plan policy today. (The County's land use designations and development regulations for the rural unincorporated areas are in effect the reciprocal of the joint policies which allow future urban development only under cities' jurisdictions. County land use policy is intended to prevent urban development outside urban service areas.)

The policies created do not foreclose the possibility of further urban expansion by cities; instead, they discourage haphazard and inefficient sprawl and protect from development in natural hazard and resource areas.

The basic components of the countywide urban development policy are as follows:

- since 1973, the policy of the Board of Supervisors has been that new urban development occur only in cities;
- each of the fifteen cities allows urban development only within established areas scheduled to be annexed and receive urban services, (the Urban Service Areas, or "USAs" (see sidebar)); and
- changes to the boundaries of the USAs are possible on an annual basis subject to approval by the county's Local Agency Formation Commission, or LAFCO.

[Note: Urban expansion may also occur through the incorporation of a community as a new city, or through the creation, or "formation," of special districts. Policies regarding incorporations and district formations follow.]

Strategies, Policies and Implementation

Strategy #1: Promote Compact Urban Development Patterns

If Santa Clara County is to successfully manage future urban growth and accommodate most of it within existing urban areas, we collectively must promote the concepts of compact urban form and compact development patterns. There are several basic aspects, or sub-strategies of this overall strategy, listed below, which are critical to its successful implementation.

Sub-Strategies:

A) Manage urban expansion by:
   i. controlling Urban Service Area expansion;
   ii. establishing long term urban growth boundaries;
   iii. controlling the formation of special districts and new cities (incorporations).

B) Make more efficient use of the existing supply of lands in urbanized areas, by:
   i. promoting compact urban development patterns, and
   ii. mixed use developments.

Urban Service Areas: Definitions And Explanations

State law defines an 'Urban Service Area' (or USA) as all developed, undeveloped, or agricultural lands, either incorporated or unincorporated, within a city's Sphere-of-Influence, which are served by urban facilities, utilities, and services or which are proposed to be served by urban facilities, utilities, and services during the first five years of an adopted capital improvement program of a city, if the city adopts that type of program for those facilities, utilities, and services. [Govt. Code Sect. 56080]

In other words, a city's USA boundary should provide through some combination of redevelopment, infill or expansion, sufficient land or development potential to accommodate five years of projected urban growth. The USA boundary location may be amended as needed over time to allow annexation of lands deemed necessary to accommodate projected urban growth. LAFCO, the Local Agency Formation Commission, has ultimate authority over this and other boundary changes.

A city's policies for managing Urban Service Area boundaries controls the timing and location of future urban expansion under its jurisdiction. Depending on the local situation, these policies encourage infill of existing vacant lands as well. (The total amount and rate of growth is determined not by the location of the USA boundary but by the cities' general plans, infrastructure capacity, or in some cases geographic constraints, among the various factors involved).

The Urban Service Area boundary differs in concept from a city's Sphere of Influence, or SOI. As strictly defined by state law, the SOI delineates the probable ultimate physical area of a local governmental entity, such as a city or special district. State law requires that all governmental entities have a defined SOI boundary. Unlike the USA boundary concept, which delineates those areas a city intends to annex and provide with services in a five year time period, the SOI concept has no temporal dimension. In addition, local application of SOI boundaries varies throughout the state of California.

Santa Clara County is unique in that it is the only county to have employed the USA concept to manage urban growth, minimize urban sprawl and efficiently provide urban services. Furthermore, portions of the system of USA boundaries in Santa Clara County function as the "probable ultimate physical" boundary of a city. For example, the City of San Jose has through its General Plan established a "Greenline Strategy" which fixes the probable ultimate physical boundaries of the city at the location of its existing USA boundary, with minor exceptions, such as the Urban Reserves. San Jose's USA contains far more than five years worth of development potential, and its redevelopment and infill policies are intended to create additional development potential over time without actual physical expansion.

In Santa Clara County, SOI boundaries function primarily to delineate those areas over which cities may extend long range planning authority, but which are not intended for annexation and urban development. For all the cities, SOI is still a useful planning tool, because it provides each city with the authority to review development proposals in unincorporated areas for consistency with the land use policies outlined in each city's general plan.

The currently delineated USA boundaries in Santa Clara County were determined primarily by the following factors or criteria:

- the amount of vacant land supply within cities and development potential remaining with the cities;
- the exclusion of lands generally unsuited for urban development and densities, including those characterized by steep slopes, geologic, seismic, flood and fire hazards, and those for which there is limited access;
- the need to protect valuable natural resources, such as wildlife habitat, riparian corridors; and
- the high costs of providing and maintaining certain areas with urban services, particularly areas with geologic or other natural hazards.

Currently by state law, cities of Santa Clara County may annex lands within their USA boundaries without LAFCO review if the proposals meet certain conditions. This procedure is referred to generally as "city-conducted" annexations.

Sub-Strategy A: Manage Urban Expansion

CONTROLLING URBAN SERVICE AREA EXPANSION

The policies of the County's General Plan are consistent with and reinforce those of LAFCO concerning future urban development and expansion.

There are many factors which the LAFCO must take into account when considering a city's request to expand an Urban Service Area boundary. No one criteria stated in the LAFCO guidelines or policies can solely determine whether proposals to expand USA boundaries into unincorporated lands should be permitted.

Among the factors LAFCO applies concerning USA boundary changes are the following:

- the need for the area being proposed for annexation in order to accommodate expected growth;
- how the proposal furthers the goal of compact, contiguous urban development patterns;
- whether the governmental agencies involved have the capacity to provide needed urban services efficiently;
- whether valuable agricultural lands are adversely impacted; and
- the effects of the proposal upon "balanced growth" objectives [see section and policies for Achieving More Balanced Urban Growth and Development].

During the period from 1980 to 1990, there were relatively few significant expansions of the urbanized area compared to previous decades. Many north valley cities have grown to the point where further expansion is limited either by topographic constraints, fiscal constraints, or the boundaries of other jurisdictions.

Although the potential for urban expansion has lessened somewhat over time, the strategies and policies discouraging unnecessary expansion are no less important today for the purposes of preserving natural resources and open space, avoiding development in hazardous areas, minimizing the costs of extending urban services, and promoting compact development within the urban areas. The County's policies embody the jointly adopted UD/OS Plan of 1973, the locally adopted policies of the LAFCO, and the role of County government in upholding the jointly adopted plan.

Policies and Implementation

C-GD 1
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.

C-GD 2
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' urban service areas.

C-GD 3
Urban service areas 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.

C-GD 4
Development activity should minimize degradation of the natural environment and avoid diminishment of heritage resources.

C-GD 5
Lands generally unsuited for urban development may be allowed to annex to cities or be included in urban service areas only if the land is preserved as a non-urban, open space use.

C-GD 6
Hazard and resource areas with the following characteristics shall be considered unsuited for urban development:
a. flood potential, including areas designated as floodways, tidal zones, coastal high hazard areas and federal flood insurance rate zones by the National Flood Insurance Program;
b. seismic and geologic hazards (see Safety chapter for complete description of types of seismic and geologic hazards);
c. sanitary landfill sites;
d. areas of soil creep, saturated soils, and areas where the water table is 3 feet or less below the surface;
e. prime agricultural soils;
f. bay wetlands;
g. water supply watersheds;
h. riparian corridors; and
i. areas generally above 15% slope.

C-GD 7
Urban expansion should be planned on a staged, orderly basis, consistent with applicable plans (e.g. city, County, countywide plans) and the availability of needed urban services and facilities. The discouragement of expansion of cities' Urban Service Areas should be recommended to the LAFCO.

C-GD 8
Proposals to annex lands or expand a city's urban service area boundaries shall be approved only if:
a. the city, special districts and affected school districts have the ability to provide all needed public services and facilities to the area within five years and without lessening existing levels of service;
b. the existing supply of land within the city's USA accommodates no more than five years of planned growth;
c. the area proposed for urban development is contiguous to existing urbanized areas.

C-GD 9
Proposals to annex lands or expand the USA of a city for the purpose of adding lands planned for employment should be approved only if:
a. lands planned for employment overall do not exceed the capacity of the city's planned housing supply; or
b. the city's housing element of its general plan can document that the housing needs of all segments of the community population are being met as stipulated by state law.

C-GD 10
Expansions of urban service areas to increase employment-related land uses should not be approved for cities where the existing or planned employment exceeds the capacity of the existing or planned housing supply unless modifications to the city's general plan and/or zoning are made to offset any increase in the imbalance of land uses.

C-GD 11
Unincorporated lands intended for urbanization should be annexed to cities at a time consistent with cities' development schedules.

C-GD 12
Annexation outside of Urban Service Areas shall not be permitted.

C-GD 13
City lands outside of Urban Service Areas and no longer planned for urbanization within the time frame of the city's general plan should be considered for de-annexation. Lands so removed shall be designated a land use compatible with the city's and County's general plans.

Implementation Recommendations

C-GD(i) 1
Undertake periodic review of locally adopted LAFCO guidelines and policies. Amend LAFCO guidelines and policies for improved consistency with County policies regarding annexations and urban services area boundary changes where advisable.

C-GD(i) 2
Maintain the County's land use, zoning and development regulations which govern development for the rural unincorporated areas and are intended to prevent urban development outside of cities' USAs. (See Rural Unincorporated Area Issues and Policies for elaboration.)

C-GD(i) 3
Continue support for city's efforts to promote appropriate infill of existing vacant lands and redevelopment through their general plans, development regulations, specific plans, as well as other implementing mechanisms.

COYOTE VALLEY

Coyote Valley lies between the southernmost part of urbanized San Jose and the northern edge of the City of Morgan Hill. It is one of the few remaining non-urbanized areas of high quality soils and large-scale agricultural land holdings in the county. The northern end of this area is currently included within the Urban Service Area of San Jose. All of Coyote Valley lies within the City of San Jose's Sphere of Influence, or planning area.

As of 1980, the policies of the County's General Plan recommended that Coyote Valley should remain in agricultural or other non-urban uses. Since that time, the City of San Jose has amended its General Plan policies for Coyote Valley. The northernmost portion has been allocated for campus industrial development, while the middle third and southernmost portion have been designated "urban reserve" and "greenbelt" areas, respectively.

The Role Of The Local Agency Formation Commission (LAFCO)

LAFCOs were created by the state in 1963, and enabling legislation related to LAFCOs has been amended several times, most recently by the "Cortese-Knox Government Reorganization Act of 1985." Their basic purpose is to "encourage orderly growth and development through logical formation and determination of local agency boundaries." {Govt. Code 56001} LAFCOs are not empowered to determine planning goals for local governments.

The types of proposed boundary changes LAFCO may approve or deny include:

- Annexation: the addition of territory to a governmental entity (antonym: Detachment)
- Incorporation: the creation of a city (antonym: Disincorporation)
- Formation: the creation of a special district (antonym: Dissolution)
- Transfer: the exchange of territory between two or more governmental entities

The stated objectives of the LAFCO as defined by the California Association of LAFCOs are:

- to encourage orderly formation of local governmental agencies;
- to preserve agricultural land resources; and
- to discourage urban sprawl.

The LAFCO of Santa Clara County consists of two members of the County Board of Supervisors, a representative of the City of San Jose, one other city representative, and a member of the public appointed by the other four members. The Santa Clara County LAFCO, in conjunction with the cities and County, adopted the basic policies and guidelines contained in the Urban Development/Open Space Plan of 1973. These guidelines and policies augment those identified in statutes that LAFCO must use in evaluating proposals for any governmental boundary change, most notably annexations and urban service area expansions. LAFCO must also consider how proposals for boundary changes conform to applicable city and County general plans.

The County's policies recognize the need for flexibility regarding the future urban development of Coyote Valley. Well-planned development of Coyote Valley holds potential for alleviating some of our most pressing countywide issues including the need for housing close to jobs, more affordable housing, improved air quality, and greenbelt opportunities, among others. Conversely, poorly managed development could have negative effects on neighboring jurisdictions and districts, the county's overtaxed transportation system, and air quality.

Current policy of the City of San Jose requires that the timing of any housing development within the "Urban Reserve" follow the development of industry in the northern third of the Valley. The primary reason for this policy is the concern that should housing precede jobs, and jobs never materialize, residents without jobs nearby will only increase the amount of traffic congestion that already overburdens major north-south thoroughfares. With a balance of industry, commercial, residential and other land uses in Coyote Valley, residents will be able to locate close to jobs, and highway capacity will be better utilized if there is more of a reverse flow to the current commute pattern. Industry preceding housing should also improve the overall balance of jobs and housing in the City of San Jose, increasing revenues needed to maintain levels of services to existing neighborhoods. (see also section on "Achieving More Balanced Urban Growth and Development" for further policies on this subject).

The County also has an important role to play in terms of development allowed to occur while the lands remain unincorporated. Land uses should remain in large and medium scale agriculture to prevent premature, haphazard urban development that would not be consistent with the objectives for the area once incorporated within San Jose. [See Growth and Development Chapter–Rural Unincorporated Area Issues and Policies, for further elaboration.]

➔ ***Policies and Implementation***

C-GD 14
Future urban development in Coyote Valley should be planned to realize the potential it holds for improving the City of San Jose's existing jobs-housing imbalance and for the benefit to the county as a whole, including:

a. development of industrial and commercial land uses in South San Jose prior to further housing development in order to alleviate commute hour traffic congestion along major north-south routes;
b. reduced dependence on the automobile and increased use of public transit;
c. an increased variety of housing opportunities; and
d. opportunities for greenbelts.

C-GD 15
Land uses along public transit corridors in Coyote Valley should be of sufficient density and adequate design to encourage use of public transit and provide affordable housing.

C-GD 16
An adequate mix of land uses should be available to employees and residents of Coyote Valley in order to minimize travel demand for goods and services outside the area.

C-GD 17
Planning for Coyote Valley's future development should provide for the following in the area of resource conservation:

a. permanent preservation of hillsides in open space;
b. retention of a greenbelt of non-urban uses and densities between San Jose and Morgan Hill; and
c. protection of a scenic corridor adjacent to Highway 101.

C-GD 18
Anticipated impacts on the South County cities and other jurisdictions from development in Coyote Valley should be adequately mitigated to less than significant levels.

Implementation Recommendations

C-GD(i) 4
Employ County General Plan policies for Coyote Valley during the process of:

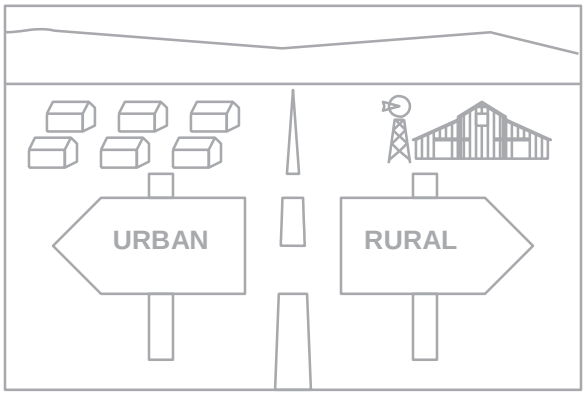
a. LAFCO review of proposed annexations and Urban Service Area expansions into Coyote Valley by the city of San Jose; and
b. reviewing San Jose's proposals for specific land use and development patterns for Coyote Valley.

ESTABLISHING LONG TERM URBAN GROWTH BOUNDARIES (UGBS)

Jointly-adopted policies of the cities and the County of Santa Clara have established cities' "urban service area" boundaries for the purpose of guiding the timing and location of urban development. These boundaries function as "short term" urban growth boundaries that generally indicate the areas within which each city is willing and able to provide urban services and facilities over a five year period.

Long term urban growth boundaries may also be a useful tool for local governments in Santa Clara County to plan for and manage urban expansion over periods longer than five years. The 1980 General Plan recommended that such boundaries be established which would define the ultimate "limit of future urban expansion" for each city within the county (Policy LU 97).

Long term urban growth boundaries would delineate areas each city sees as appropriate and needed for future urban growth over the next 20 years, and conversely, would also indicate those areas not deemed appropriate or necessary to accommodate projected needs for urban lands.



As such, they would complement the existing system of urban service area boundaries by providing a longer term framework within which incremental expansion of urban service area boundaries could take place.

■ Purposes and Potential Benefits of Long Term Urban Growth Boundaries

Long term urban growth boundaries have several basic purposes or functions. In and of themselves, they delineate areas intended for future urbanization from those not intended for urban uses. However, as a part of the overall countywide strategy for managing and accommodating future urban growth, they can be instrumental in:

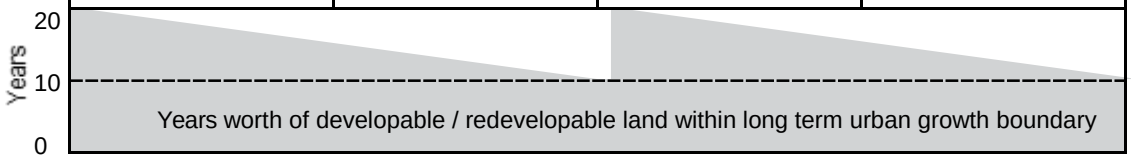
- promoting compact urban form and development patterns;
- protecting valuable natural resource areas;
- preventing urbanization of hazard areas; and
- enhancing greenbelt opportunities.

In addition to these overall functions, long term urban growth boundaries may provide a wide variety of benefits to local governments, landowners, and the general public:

- For local governments, they could provide a useful tool for:
  - i directing the location and extent of future urbanization, and
  - ii planning for needed infrastructure improvements and efficiently providing urban services.
- For landowners, they would increase the certainty over long-term land use in urban fringe areas, providing:
  - i disincentives for speculative land purchases, and
  - ii a surer sense of whether and when lands might be needed for urban purposes. For example, farmers would be given a more solid basis for making long term investment decisions concerning purchases of land, equipment, or other major capital outlays.

Proposed Timeline for Review of Long Term Urban Growth

Year 0	Year 5	Year 10	Year 15
Conduct analysis Establish long term urban growth boundary	Compare actual growth with assumed growth Revise boundary if significant difference in long term growth forecasts	Conduct analysis Re-establish 20 year supply of land within long term urban growth boundary	Compare actual growth with assumed growth Revise boundary if significant difference in long term growth forecasts



- For the general public, long term growth boundaries would provide:
  - i greater assurance that important natural resource areas and critical hazard areas will be protected from urbanization, and
  - ii additional assurance that extending urban development into new areas will not result in reductions of urban service levels received by existing neighborhoods.

■ Criteria for Delineating Long Term Urban Growth Boundaries

There are a number of criteria, or factors, which would need to be included in the methodology of delineating long term urban growth boundaries including:

- population and economic forecasts for growth;
- estimates of the total land supply needed to accommodate forecasted growth;
- types of development to be accommodated, whether only residential, or also commercial, industrial, and all other types of land uses;
- the desired density of development within existing urban areas (infill) and within expansion areas to promote transit use, air quality, housing affordability;
- types and location of natural resource areas to be protected from urban development;
- types and location of natural hazard areas to be avoided, as well as geologic, topographic, and other physical constraints to urban development;
- contiguity of future urbanization to existing urban areas;
- fiscal capacity of local governments to provide needed levels of urban services, as well as available infrastructure capacity and limitations; and
- the duration of the boundaries (20 years), the frequency of review, and re-establishment procedure set forth under the guidelines approved by the Local Agency Formation Commission (LAFCO) and local jurisdictions.

■ Adoption Alternatives and Enforcement

There are three basic alternatives by which long term urban growth boundaries might be adopted and enforced. These are as follows:

- Cities could individually delineate and adopt growth boundaries. Some cities have already adopted similar types of planning boundaries for their own purposes.
- The County and an individual city could mutually define and adopt an urban growth boundary and the policies for land use within and outside of the boundary line.
- The County and a collection of cities could enter into a mutual process for defining and adopting such boundaries.

Absent state law requiring long term urban growth boundaries, such boundaries can be effective only if subscribed to and adopted by cities. The cities must be directly involved in the delineation and adoption of these boundaries. In addition, school districts and various other major special districts are directly impacted by the long-term growth decisions of the cities, and these governmental agencies should also be involved in the process of delineation and adoption in some way to prevent unforeseen adverse impacts on the services these agencies provide.

Regardless of the adoption procedure used to establish the boundary, a regional or subregional governing body should be designated to enforce adherence to the long term urban growth boundary and to administer periodic reviews of the boundary. For instance, the Santa Clara County Local Agency Formation Commission (LAFCO) might adopt local policies regarding the establishment, enforcement and review procedures for urban growth boundaries over time.

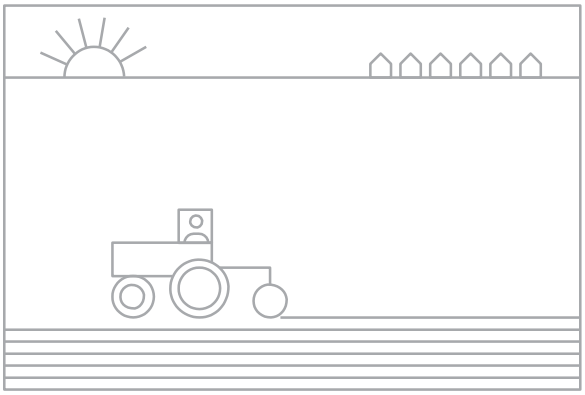
■ Review of Long-Term Urban Growth Boundaries

Long-term growth boundaries should initially contain 20 years of urban growth potential, whether accommodated through infill patterns, urban expansion, or a combination of approaches, depending on the particular circumstances of a jurisdiction. However, they must also allow for flexibility if the assumptions and growth projections under which the boundaries were established are not borne out.

The "timeline" for the long-term urban growth boundary would provide two junctures for review of the boundary location. Five years after the 20-year boundaries are delineated, there should be an initial check primarily to determine if the basic growth projections are in keeping with current conditions. Barring major differences between the current and projected levels of population and economic growth, the Urban Growth Boundary (UGB) would remain in its original location until the 10 year review. However, new information regarding any of the criteria originally employed in locating the UGB could potentially require a more extensive review and possible revision if the information were significantly different from original conditions.

For example, were new information to reveal the presence of a previously unknown fault line or other natural hazard affecting lands within the UGB, changes to the location of the boundary might be warranted to the extent necessary to correct the situation. Conversely, were growth rates to exceed projections and require additional land supply within the UGB, a change to the boundary might be needed to correct for the deficiency. However, any five-year revision to the location of the UGB, for whatever purpose, would have to include all factors or criteria employed in establishing the boundary, weighing growth factors, environmental factors, as well as various planning principles.

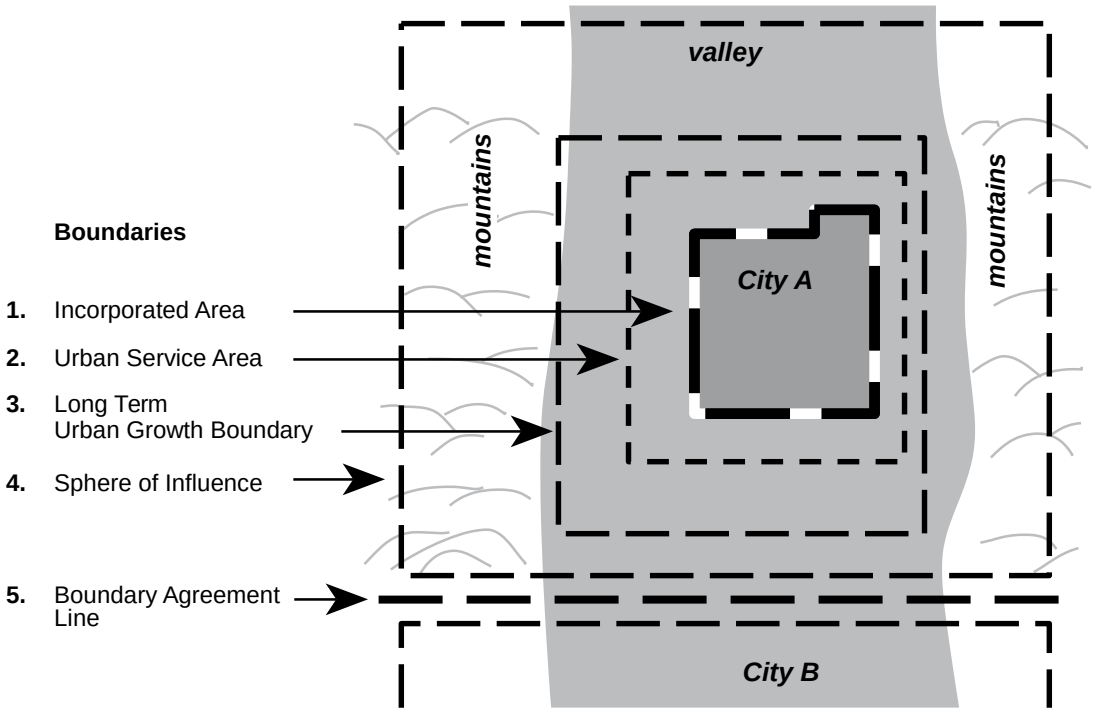
At ten years from the time the UGB was delineated, a comprehensive review would be undertaken to re-establish a supply of vacant or redevelopable land sufficient to accommodate 20 years of projected urban growth and development. The review methodology must incorporate the procedures and criteria by which the boundary lines were originally delineated. By evaluating the urban growth boundary at ten years rather than fifteen, when only 5 years of urban land supply remains available, cities will be able to make optimum use of the UGB as a mechanism for long term infrastructure planning and urban services provision.



Glossary of Jurisdictional and Growth Management Boundary Terms

Boundary	Definition / Description
1. **Incorporated Area Boundary**	"City limits"; Delineates lands currently annexed to city
2. **Urban Service Area (USA) Boundary**	Delineates areas currently provided with urban services, facilities, and utilities or proposed to receive such services within 5 years
3. **Long Term Urban Growth Boundary (UGB)**	Delineates areas appropriate for and likely to be needed for urban purposes within the next 20 years
4. **Sphere of Influence (SOI) Boundary**	In Santa Clara County, generally defined as city's planning area (i.e. area covered by general plan); often includes hillside areas the city has designated for non-urban uses and does not intend to provide with urban services. (State defines as the probable ultimate physical boundaries and service area of the city.)
5. **Boundary Agreement Line**	Delineates limits beyond which a city will not be allowed to annex territory.

Hypothetical Relationships Among Jurisdictional and Growth Management Boundaries



■ Augmenting Long-Term Urban Growth Boundaries

Portions of some long term urban growth boundaries may coincide with boundaries which cities have established as permanent limits beyond which they do not ever intend to extend urbanization. In such instances, additional tools or methods may be needed to assure that lands outside these boundaries in fact remain permanently in non-urban uses. These may include various forms of public acquisition of land or easements, transfer of density or development rights, or other mechanisms. In other instances, where lands lying outside an urban growth boundary may eventually be needed for urban uses beyond the 20-year time horizon of the boundary, property tax abatement by means of Williamson Act contracts may be appropriate.

■ County Land Use Policy in Relation to Long-Term Urban Growth Boundaries

Finally, once long-term urban growth boundaries have been established, it should be the policy of the County to maintain rural unincorporated lands within these boundaries in large parcels. This will help ensure that when the time comes for them to be incorporated into the urban area, they can be efficiently developed as large, well-planned neighborhoods with adequate community facilities and amenities rather than as a series of small, unrelated subdivisions.

➔ *Policies and Implementation*

C-GD 19
The County, cities, and other affected governmental entities within Santa Clara County should establish long term urban growth boundaries for the purposes of:

a. providing clear indication of the desired direction, location, and extent of long term urban expansion;
b. providing adequate protection for natural resource and hazard areas from urbanization; and
c. ensuring efficient urban services provision.

C-GD 20
If adopted, long term urban growth boundaries should initially include sufficient land supply to accommodate the projected needs for urban land in various uses for a period of 20 years.

C-GD 21
Long term urban growth boundaries should not include:

a. important natural resource areas;
b. natural hazard areas; or
c. land supply in excess of that needed for projected urban growth

C-GD 22
Long term urban growth boundaries (UGBs) containing a 20 year supply of available land for urban development should be reviewed periodically to determine if there is a need to revise their location.

1. Initial review of the growth projections and other factors or criteria on which an UGB has been established should occur after five years.
2. Revisions to the existing location of an UGB may be warranted if projections prove substantially out of keeping with current conditions and projections five years after initial delineation. New information concerning other factors may also warrant revising the UGB's location to the extent necessary to correct the given situation.
3. Ten years following the delineation of an UGB, a comprehensive review should occur in order to re-establish a 20-year supply of land within the UGB.

Implementation Recommendations

C-GD(i) 5
Define and initiate a process for mutually delineating long-term urban growth boundaries for the cities of Santa Clara County. The procedures should include the following:

a. identification of affected governmental entities;
b. research and implementation of a methodology for estimating land supply needs and land supply monitoring;
c. identification of areas to be excluded from urban development on the basis of natural resource or hazard protection; and
d. manner in which long-term urban growth boundaries will be adopted by affected cities and the County, as well as the means of enforcement and frequency of assessment.

CONTROLLING THE FORMATION OF SPECIAL DISTRICTS AND NEW CITY INCORPORATIONS

■ Special Districts

Special districts and special assessment districts are governmental entities created for the purpose of providing one or more services within a specified geographic area. Services provided by such entities vary greatly in scope and extent of territory served. For example, a special district may be formed among a group of property owners for the purpose of providing a particular type of needed service, such as water supply or sewage disposal. In other cases, the district may include several cities or counties, such as the Santa Clara Valley Water District (SCVWD) or the Bay Area Air Quality Management District (BAAQMD).

Reasons for strictly regulating the creation of special districts and assessment districts include:

- The need to certify that adequate revenues will be available to the district to provide funding for its service(s).
- The need to limit the number of single-purpose districts, both to make inter-governmental coordination of service providers more feasible, and to ensure that service provision in general does not become so fragmented that accountability suffers.
- The need to uphold the basic policies of the County and cities regarding location of urban development.

With regard to the latter, special districts pose several potential problems. Without policies and regulations to control formations, water supply and sewage disposal districts could be created in order to foster development in locations where it would otherwise not be allowed. Such development could in turn create the need for additional or higher levels of public services than have been planned for the area. In order to prevent urban development from occurring in urban transition areas or on unincorporated lands where it otherwise would not be appropriate, the County generally prescribes lower levels of urban services than would be available within cities.

As with other governmental organization and boundary change proposals, LAFCO must evaluate the proposed special district according to several criteria before approving or denying the request.

Each special district proposal must demonstrate that:

- the district will be fiscally capable of providing the proposed services;
- there is a demonstrable need for the service;
- the service proposed will not unnecessarily duplicate or overlap services provided by existing governmental entities; and
- the uses served by the district are in conformance with the policies of applicable plans, including the County's General Plan.

In Santa Clara County, there are currently 33 special districts. School districts are not subject to regulation by the LAFCO and follow separate procedures for formation.

New City Incorporations

Incorporation is the formal term used to describe the creation of a new city. Although in the 1990s and beyond there are few if any unincorporated communities which have potential to incorporate as new cities, the same basic criteria apply as those which govern special district formation. The most critical factor involved for approval of incorporation is the ability to generate tax revenues sufficient to provide the full complement of needed urban services and facilities. In addition, new cities should not be created on lands that would not generally be deemed suitable for urban development at any urban density. The cities' Urban Service Areas have already been established to generally exclude natural hazard and resource areas. Potential new city incorporations should also avoid such areas for urban development.

➔ *Policies and Implementation*

C-GD 23
Annexation to cities should take precedence over annexation to or formation of a special district. Proposals for the formation of a new special district must demonstrate that the need for services cannot be better met through annexation to a city or an existing special district.

C-GD 24
Any proposal to provide urban services by means of a special district should be evaluated to ensure:

a. that the area has been designated for development compatible with the types and intensity of the proposed urban service or facility, and
b. that the service plan is consistent with the applicable general plans of the County and affected city(s).

C-GD 25
Proposals for the formation of a special district or new city incorporation should not be approved unless proponents can demonstrate that there is a sufficient revenue base to support the new services without diminishing the tax base of existing governmental entities.

C-GD 26
The formation and activities of special districts should be consistent with adopted urban development policies of the Local Agency Formation Commission, the cities, and the County.

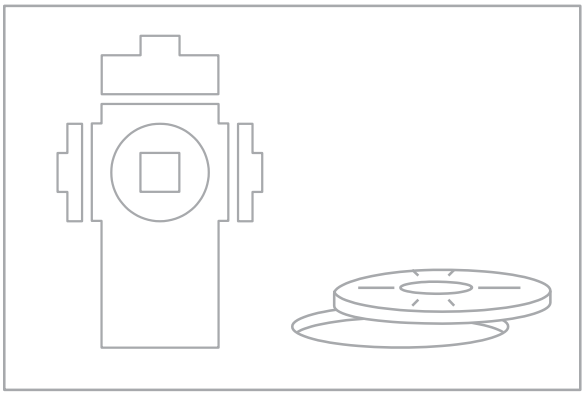
C-GD 27
Consolidation of special districts should be encouraged in order to assure cost-effective public service provision and eliminate unnecessary duplication of governmental entities.

C-GD 28
Proposals for incorporation must demonstrate that:

a. the need for municipal services or control cannot be better satisfied by an existing city or the County;
b. the proposed new city will be able to raise sufficient revenues to fund required services at the desired level; and
c. areas deemed generally unsuitable for urban development, such as those with natural hazards or critical resources, are not planned for development.

Implementation Recommendations

C-GD(i) 6
Undertake periodic review of the effectiveness of locally adopted LAFCO guidelines and policies. Amend LAFCO guidelines and policies for improved consistency with County policies regarding special districts, if necessary.



Sub-Strategy B:
Make More Efficient Use of Existing Urban Areas

ABAG projections indicate that from 1990-2000, Santa Clara County will grow in population by 200,000, from approximately 1.5 to 1.7 million. That total is roughly the combined 1990 population of the cities of Sunnyvale (117,000), Milpitas (50,000), and Campbell (36,000). (Total population growth from 1980-1990 was just over 202,500).

During the 1990s and beyond, Santa Clara County will continue to evolve from a collection of suburban, low density cities into a more densely populated and developed metropolitan area. If most of our future urban growth is to be accommodated efficiently within existing urban areas, we must not only proactively manage urban expansion, but also make more efficient use of available lands within the urban areas. Compact and mixed-use development, in conjunction with urban service area and growth boundary policies, will help maximize development potential, as well as contribute to a number of other vital community goals, such as transit feasibility and air quality.

The jointly adopted, countywide urban development policies acknowledge that a certain amount of outward expansion will undoubtedly be needed (See Growth Projections). Efforts to promote higher density urban development will not preclude continued single-family housing development. However, infill of vacant lands and redevelopment of underutilized areas should receive priority over urban expansion.

With more than 80% of future growth anticipated to occur in the 13 "North County" cities where the majority of the population now resides, it will become even more imperative to rely on compact development to efficiently accommodate population increases. In many instances, geographic and jurisdictional boundary constraints to expansion make it impossible to accommodate new population and economic growth through expansion.

COMPACT AND MIXED USE URBAN DEVELOPMENT

■ Definitions of Compact and Mixed Use Development

"Compact development" is a term generally used to refer to urban development at higher densities, applied in selected areas and coupled with increased emphasis on innovative urban design to enhance the livability of these areas. "Mixed use developments" are those which combine in varying proportions residential, commercial, retail, services, office, or even institutional land uses in a single development project. "Compact development" then, is but one of several means of achieving compact urban form for the metropolitan area as a whole, in addition to such means as policies that encourage infill development, channeling growth into existing urban areas rather than by means of continuous outward expansion.

Mixed use developments promote accessibility to work, goods and services without automobile transport by placing a variety of uses in close proximity. The scale on which mixed use developments are planned may range from small projects that blend in with existing urban landscapes to very large scale "urban activity centers," or transit "nodes," so called because such centers can provide a land use focus for the development of mass transit, particularly light rail.

■ Benefits of Compact and Mixed Use Development

The principles of compact and mixed use urban development are being increasingly emphasized in many cities' plans for growth and redevelopment. Examples include several Specific Plans developed by San Jose for areas including Communications Hill, the Jackson-Taylor area, and a portion of the Lincoln-Auzerais area now referred to as "Midtown." The cities of Mountain View and Sunnyvale have also incorporated these principles into planning for the redevelopment of central city areas. Other examples could be noted, as well. These beginnings of an urban renaissance promise many advantages over traditional low density, highly segregated land use patterns.

In brief, the benefits of these alternative patterns of urban development include:

- Densities sufficient to support transit services and investments;
- Improved access to goods, services and employment locations;
- Efficient use of utilities and other basic infrastructure;
- Enhanced community identity, amenities, and sense of place through better design;
- Increased variety of housing types; and
- Improved viability of downtowns.

CHALLENGES AND OPPORTUNITIES

Increased urban densities demand greater emphasis on adequate, innovative urban design and adequate urban services and amenities. In addition to promoting access to and use of transit services, compact and mixed use developments must also maintain the livability of our urban communities with:

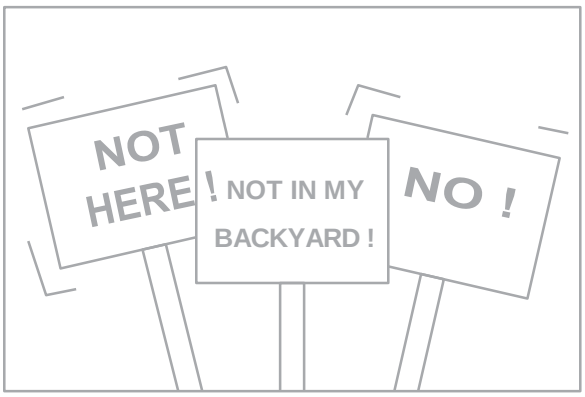
- accessible urban open space, commons, and recreational areas;
- adequate safety and security of neighborhoods, both in terms of design and security services; and
- adequate levels of urban service and facilities, including school facilities.

Blending compact and mixed use developments into the existing low density urban landscape may also present certain challenges in terms of urban design and infrastructure capacity. Increased market acceptance of compact and mixed use developments will also depend upon higher quality, innovative designs for compact and mixed use projects. For example, open space, safety, and adequate urban services and facilities are particularly important for families with young children.

An additional obstacle to higher densities and mixed land use is the increasing "NIMBY" phenomenon, or "not in my back yard" response frequently raised by opponents of proposals for higher density housing or other perceived threats to established neighborhoods. NIMBY factions have challenged proposals for senior housing, multi-family housing for low and moderate income households, and other special needs housing, among other developments, on grounds ranging from property values and community character to traffic and noise issues. The concerns of such groups are real and often well-founded. Much of the public's impression of higher density, compact and mixed use development has been formed in reaction to older developments which exhibited poor design, such as lack of open space and amenities, insufficient circulation and parking, and other inadequacies that impacted existing neighborhoods.

However, the challenge for the future must be to accommodate needed housing and a variety of other locally unwanted land uses by means of innovative, high quality urban design and careful land use planning. When viewed from a strictly localized, neighborhood perspective, each neighborhood may seem to be an inappropriate location for the project. However, local decision-makers must view the need for the proposed facility or project from a communitywide perspective, in which case there inevitably will be some locations that are more suitable and appropriate than others. In fact, more and more of the general public now recognize the limitations imposed by the NIMBY perspective.

For example, for the first time ever, a majority of respondents to the annual Bay Area Poll (51% to 38%) supported infill over urban expansion to accommodate future growth, even if that means higher densities (1991 poll). To bolster this trend, there is an increasing need for coalition-building, exemplary developments that demonstrate effective solutions, and public education to balance local and community-wide perspectives.



Much of the land within our cities is built out, and not all of our urban landscape presents opportunities for compact or mixed use developments. However, opportunities do exist, whether through infill of vacant lands, redevelopment near downtowns, or in conjunction with transit corridors and stations.

➔ ***Policies and Implementation***

C-GD 29
Land use and development patterns that enhance the cost effectiveness of transportation and other urban infrastructure investments should be encouraged.

C-GD 30
Cities should make maximum use of vacant or underutilized lands within the existing urban area for application of compact and mixed use development principles. Wherever possible, expansion of the urbanized area should also incorporate such principles.

C-GD 31
Mixed land use and compact developments should be encouraged in urban areas wherever appropriate and compatible with city plans and existing development for the purposes of enhancing community identity, creating more affordable housing, reduced auto dependency, trip reduction, and improved environmental quality.

C-GD 32
Mixed land use and compact development should be encouraged which clusters employment, residential, and the types of land uses, goods, and services customarily needed on a daily basis around transit stations, along transit corridors, and in other appropriate urban locations.

C-GD 33
Cities' land use plans should be coordinated and consistent with long range master plans for light rail and other transit services.

C-GD 34
Planning must ensure that adequate services and amenities are available to urban areas proposed for compact development and/or mixed use centers, including but not limited to adequate:

a. urban open space, commons, and recreational spaces;
b. public safety and security;
c. urban services and infrastructure, including dependent care and school facilities; and
d. transportation system capacity, both streets and transit services.

C-GD 35
Employment area densities should be increased wherever practical to support efficient public transit service.

C-GD 36
Ensure adequate citizen involvement in proposals for alternative urban land use patterns.

Implementation Recommendations

C-GD(i) 7
Implement compact and mixed use development through modifications to cities' general plans, zoning, and development ordinances.

C-GD(i) 8
Encourage local urban design and architectural professions to promote concepts of compact and mixed used development and design excellence through a variety of means, including:

a. design exercises and competitions for candidate project sites;
b. seminars within professional and civic organizations; and
c. presentations to local legislative bodies and advisory commissions on land use, housing, and transportation.

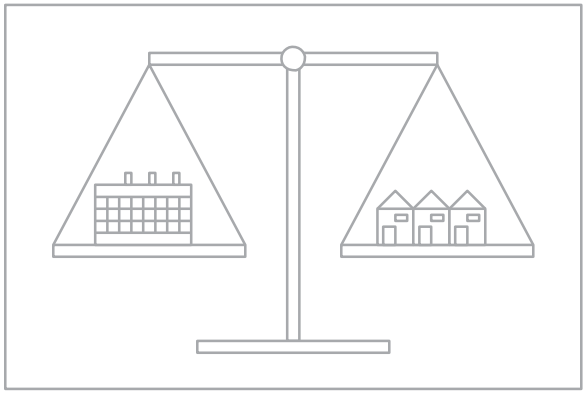
C-GD(i) 9
Develop on an interjurisdictional basis a countywide ("sub-regional") plan for land use and infrastructure capacity which incorporates recommendations and policies regarding alternative land use and development patterns from the Congestion Management Plan, T-2010, and city and County general plans.

Strategy #2:
Achieve More Balanced Growth and Development

PAST AND FUTURE CHALLENGES

For much of its recent past, Santa Clara County's economy has centered upon its agricultural base. The name "Valley of Heart's Delight" was a testament to the relatively unproblematic nature of urban life in a predominantly rural setting. The county's transformation over the last two decades into an economy of manufacturing, high technology, and related activities known as "Silicon Valley" ushered in an era of unprecedented prosperity. Unfortunately, employment growth and rapid urban decentralization have also spawned a cluster of interrelated urban problems with which the region must now contend, including traffic congestion, housing unaffordability, and fiscal instability.

As we enter the 1990s, the challenge of the future is no longer one of coping with the impacts of rapid employment growth on housing supply, infrastructure, and environmental quality. The economy of Santa Clara County now faces many challenges, including mounting international competition, as well as job losses due to recession, industry maturation, and other structural economic changes. What once seemed a secure economic future is now a question mark.



The challenge for the future will be how to maintain moderate, sustainable levels of economic growth on which a growing population will depend for jobs and on which governments depend for revenues to fund essential services. For that to happen, we must be more successful in meeting our housing, open space, air quality, and human service needs, among other issues that form the very foundation of sustainable economic growth. That "balancing of objectives" is the essence of the second major strategy of this General Plan for managing and accommodating future urban growth–achieving more balanced urban growth and development.

IMPACTS OF UNBALANCED GROWTH

From the 1960s until the early 1980s, two major growth trends predominated. First, employment and economic growth generally outpaced housing supply, infrastructure, and urban services capacity.

Secondly, the vast majority of housing development occurred at ever-growing distances from major employment centers. The first trend resulted in large numerical "imbalances" between the various "components" of urban growth. The second trend resulted in large-scale geographic separation of residential development from major employment areas, or a kind of "spatial imbalance," as it has been referred to. These two trends, and the various adverse impacts described below became known as the problem of "jobs-housing imbalance."

The principal impacts of these numerical and spatial imbalances have been clear for some time:

- increased travel and commute distances, which have overburdened the county's roads and highways;
- increased automobile dependency;
- increased housing affordability problems, especially in "job-rich" cities;
- increased amounts of automobile emissions affecting air quality;
- overburdened urban services and facilities; and
- financial strains upon those cities which have a preponderance of housing in relation to employment land uses.

These impacts or problems are not solely the result of the "jobs-housing" growth imbalances described generally above; however, each has been adversely affected in some way by growth imbalances. Another aspect of the overall problem which should not be overlooked has to do with "fiscalization of land use."

Local governments must rely largely upon locally- derived sales and property tax revenues as sources of funding. As a result, cities have tended to favor commercial, retail and industrial land uses over residential, which generally demands more in government services than it provides in property tax revenues. Proposition 13 exacerbated this problem significantly, increasing the tendency to give preference to revenue-generating land uses in long range land use planning, hence the term "fiscalization of land use."

Part of any solution to the problems of growth imbalances must address the fundamental way local governments are financed or the distribution of local government revenues. Otherwise, the disincentives to balanced growth inherent in our existing finance system will continue to work against other efforts to alleviate housing shortages and affordability problems. Fiscal stability of "job-poor" cities will also continue to suffer, compounding the difficulties of maintaining service levels to existing urban development.

REFINING THE CONCEPT OF A "JOBS HOUSING BALANCE"

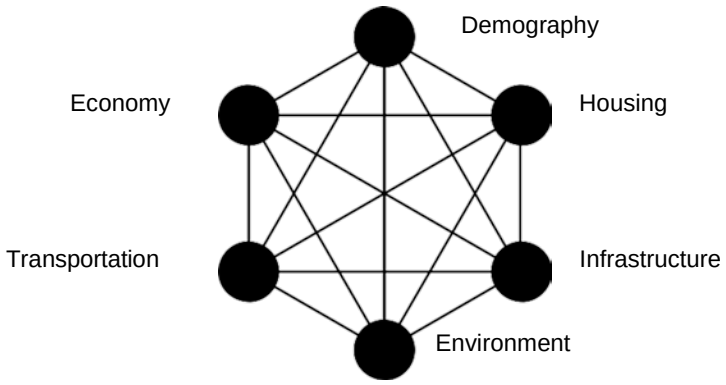
The problem with a two-dimensional term like "jobs-housing balance" is that it obscures the other major elements or variables in the growth management equation, such as environment, infrastructure, and public services. It is also overly-simplistic in another sense. "Jobs-housing balance" implies that all that is needed to solve the problem is to achieve some sort of numerical balance or parity between employment and housing, irrespective of issues such as housing location, housing costs, public service levels, transportation system impacts, and environmental impacts.

The broader concept of "balanced urban growth and development" more accurately reflects the scope of issues involved and the need to solve for multiple objectives, or "variables" in the growth management equation. This concept of balancing multiple objectives is illustrated in the graphic below.

In a nutshell, the strategy describes a general approach to urban problem-solving which promotes the following:

- consistent rates of future urban growth;
- rectifying past growth imbalances and ensuring consistency between employment, housing, infrastructure and services at "build-out" as described by cities' general plans; and

BALANCED DEVELOPMENT: Some Factors to Be Considered



- solutions which reflect the multi-dimensional nature of our urban problems.

Economic growth and diversification have created unprecedented prosperity for many of the residents of Santa Clara County. Choosing not to accommodate further growth is not really a solution to our urban problems at all. Solutions which work against other important objectives are equally undesirable, such as urban development which increases automobile dependence. Achieving more balanced urban growth and development countywide and among individual cities will be critical if we are to (a) prevent economic gains and overall quality of life from being further eroded, and (b) extend the promise of a better future to those who have not equally benefited from that general prosperity.

PRINCIPAL ASPECTS OF A BALANCED GROWTH AND DEVELOPMENT STRATEGY

The feasibility of achieving more balanced urban growth and development is complicated by numerous factors. These factors include:

- high percentage of households with two or more workers, which complicates commuting patterns and residential location choices;
- widely dispersed instead of geographically concentrated employment land uses; and
- limited infrastructure capacity or development potential in some areas to accommodate higher density, infill development.

Those difficulties should not obscure the need to increase our efforts as described below. These issue areas represent the principal aspects of a multi-dimensional approach to balanced urban growth and development. Each is further elaborated upon in the chapters which more specifically address these issues.

■ Housing-Related Principles

- Supply should be available that is adequate to overall demand based on employment, household diversity, and the number of households which contain no employed person(s).
- Increase the proximity of employment and housing to the greatest extent possible.
- Affordability of housing should be commensurate with household income distribution

■ Transportation/ Urban Infrastructure Aspects

- Increase multi-modal system capacity to meet current needs.
- Place greater emphasis on transportation demand management, higher density land use close to transit, and improved transit systems to meet future needs.
- Efforts to reduce spatial imbalances should not have effect of merely shifting congestion from freeways and expressways onto local street systems.
- Levels of government services and facilities in general should be equal to the demand created by population and employment.

■ Environmental Aspects

- Accommodate employment and population growth such that environmental quality is maintained and enhanced.
- Place emphasis on resource conservation and restoration, open space preservation, recreational opportunities, and habitat conservation that increases as employment and population increase.

■ Other Critical Aspects

- Balance growth and development for North Valley and for South Valley (south of Coyote Valley) as separate sub-regions.
- Address “fiscalization of land use” as an underlying cause of unbalanced growth.
- Planning for higher land use densities, including employment areas, capable of supporting cost-effective transit service over the long term.
- Impacts of imbalanced growth on neighboring counties in terms of development pressures, traffic congestion, and housing affordability.

Factors Affecting Implementation of a Balanced Growth Strategy

Balanced urban growth and development is a strategy for achieving:

a. consistent rates of current growth;
b. consistent amounts of future development at "build-out," indicated by long-range land use plans for
   - employment land uses,
   - housing supply,
   - transportation capacity,
   - public services and facilities ("infrastructure"), and
c. development that is consistent with environmental goals and standards.

Many jurisdictions and regions of the country attempting to define balanced growth and development objectives have chosen only to address the employment and housing dimensions of the strategy, or "jobs-housing balance." Even with this limited approach, defining what "balance" means in terms of ratios requires taking into account a variety of characteristics and statistical information which varies by city and sub-area, including total job estimates and incomes, the number of workers per household, the number of housing units, the number of households, vacancy rates, and housing cost factors. Determining the appropriate area in which to achieve a certain ratio of housing to employment creates an additional layer of complexity.

Whether balance is sought on a regional, sub-regional or countywide, city, neighborhood or project level, there can be many limitations to the feasibility and the potential effectiveness of implementing a balanced urban growth and development strategy. The most important to note are the following:

Factor 1: Employment centers in Santa Clara County are highly dispersed over an immense North Valley metropolitan area, and less than 50% of peak hour traffic is strictly "commuter" traffic.

Effect: Efforts to increase housing supply and proximity of housing to employment may not significantly reduce congestion without system-wide measures to reduce travel demand and single-occupancy vehicle (SOV) use, improve traffic flows, increase transit service and ridership. (see Transportation Chapter)

Factor 2: There may be limited land supply and infrastructure capacity in many portions of the urban area.

Effect: There is a need to more equitably distribute local government revenues in order to offset costs to jurisdictions which accommodate the housing needs of other cities' workforces, and the need to review local land use plans in order to promote mixed use and compact developments along planned transit corridors.

Factor 3: There are large numbers of households with two or more workers, which complicates the choice of residential location for many whose jobs are not in close proximity.

Effect: Even if perfectly balanced urban growth and development conditions existed in Santa Clara County, not all households would choose to or be able to reside in close proximity to workplaces, for reasons of commute distances, housing costs, need for dependent care services, or other personal preferences.

Factor 4: Increasing the overall housing supply relative to employment alone does not obviate the need to ensure that more of those units are affordable, in desired and appropriate locations, and of an adequate variety of housing types.

Effect: Improved planning and coordination are needed to provide housing of the type, location, and cost characteristics needed within each jurisdiction.

➔ Policies and Implementation

C-GD 37
Within the urban areas of Santa Clara County, a balance should be achieved and maintained between employment levels, housing supply, infrastructure capacity, and environmental quality.

C-GD 38
Increases in employment should be consistent with the following:
a. the rate of housing supply increase;
b. the ability of cities and districts to provide needed urban services and infrastructure without lessening levels of service to existing neighborhoods; and
c. the attainment of environmental quality standards.

C-GD 39
Geographic separation of housing and employment should be reduced to the maximum extent possible through a variety of means, including:
a. increased housing opportunity in job-rich cities where feasible;
b. mixed use and compact development patterns, including on-site housing for employment centers; and
c. increased housing densities along transit corridors, or "transportation-efficient land use," combined with mixed use "urban activity centers" at transit stations.

C-GD 40
Improved balance between employment and housing opportunities should include the need for:
a. increased overall supply and more varied types of housing;
b. housing costs commensurate with household income distribution; and
c. increased proximity of housing to employment centers.

C-GD 41
Cities should take maximum advantage of the development potential of their vacant land supply and underutilized industrial/commercial lands to achieve more balanced growth and development.

C-GD 42
Disincentives to achieving more balanced urban growth and development inherent in the current system of local government finance should be reduced or eliminated.

Implementation Recommendations

C-GD(i) 10
Monitor the effects of efforts to achieve more balanced urban growth and development. Indicators of improvements in balanced development include:
a. rates of housing development;
b. congestion levels on major roads and intersections;
c. rates of employment increase and housing development;
d. air quality improvements;
e. no. of trips by single-occupancy vehicles; and
f. public attitudes.

C-GD(i) 11
Utilize the development of a countywide plan for land use and infrastructure to achieve more balanced urban growth and development:
1. Coordinate cities' long-range land use plans with long-range master plans for light rail and other transit service investments.
2. Calculate potential employment, housing, and infrastructure capacity at build-out levels as indicated by each cities' long-range plans for land use, housing, and transportation/ circulation.
3. Evaluate alternative scenarios for countywide land use and development for growth impacts upon infrastructure investments, schools, as well as others.

C-GD(i) 12
On a multi-jurisdictional level, promote coalitions of cities to cooperatively plan for mutual areas of concern to mitigate past growth imbalances.

C-GD(i) 13
On a municipal level, particularly for "job-rich cities," reduce discrepancies between employment and housing supply as much as is feasible through various means, including:

a. land use and rezoning studies to promote balanced growth and development; and
b. initiate "linkage" policies or other means that ensure more consistent rates of new employment, housing and infrastructure capacity (e.g.: below-market rate inclusionary housing policies).

C-GD(i) 14
On the site-specific or project level, encourage mixed-use development and increased densities to promote accessibility to work and other daily trip-generating destinations, such as dependent care, retail, and recreational uses.

C-GD(i) 15
Initiate studies of mechanisms of reforming local government finance to reduce disincentives to achieving more balanced urban growth and development (also known as: "fiscalization of land use"). Coordinate with state legislative committees to develop proposals.

Strategy #3:
Improve Coordinated, Countywide Planning

The third major component of the countywide strategy for managing and accommodating future urban growth is improved countywide coordination and planning. This section will address:

- the rationale for improved coordination and countywide planning;
- sources and components of a countywide plan; and
- means of implementing the plan.

[Note: The subject of regional and sub-regional governance is further addressed in the Governance chapter].

RATIONALE FOR A COUNTYWIDE PLAN

■ Fragmentation of Planning Authority

Rapid population and economic growth, coupled with haphazard expansion of urban development over the last several decades has left a legacy of highly fragmented local planning and land use authority. With 15 cities, over 30 special districts, the County government, and a multitude of public agencies conducting their own planning for their own needs, planning for the future of the county as a whole has been lacking. No unified vision of the county's future physical development played a part in the various planning activities conducted by this collection of local governments. This, unfortunately, is just as true in 1994 as it was in 1980, despite a general increase in the level of coordination between jurisdictions for particular purposes.

Cities and districts can and often do have very different needs and problems facing them; however, as we approach the 21st century, numerous problems affecting all or nearly all jurisdiction call for collective, or countywide approaches.

Problems Aggravated by Fragmentation

Fragmentation of planning and land use authority has limited significantly our ability to address problems of both urban and rural areas which transcend jurisdictional boundaries. These include but are not limited to:

- housing costs far out of reach of most moderate income households, and wide-scale geographic separation of employment and housing supply;
- system-wide traffic congestion;
- air quality which does not attain state and federal standards;
- increasing demand for public services and facilities, including schools, social welfare services, and other facilities, which strain local government financial resources; and
- the lack of coordinated, countywide planning for economic development, competitiveness, and employment needs.

Needed: A More Comprehensive Countywide Plan or Course of Action

These problems represent in part the cumulative impacts of the amount of urban growth and development which has occurred over time, as well as of the patterns of that growth. What is needed in response is more effective countywide coordination and planning than has been the case in the past; in essence, a unified framework of goals and policies developed jointly and adopted by the cities, County, and districts of Santa Clara County.

The countywide plan should at a minimum consist of:

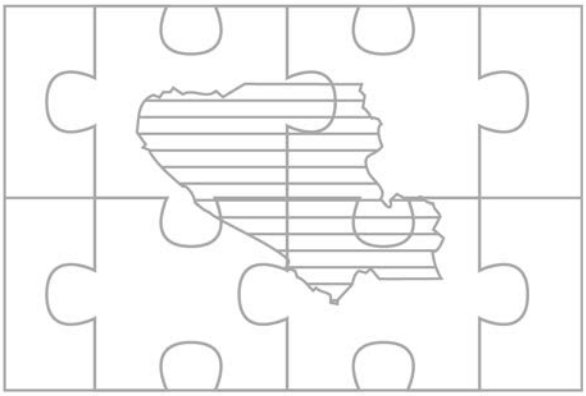
- common goals and objectives, expressed in a statement summarizing our collective vision of the future of Santa Clara County;
- comprehensive strategies and policies that improve the consistency of participating jurisdictions' efforts; and
- implementation designed to make the plan effective (incentives), enforceable if needed, (requirements), and capable of resolving disputes between jurisdictions.

These aspects of a countywide plan could be prepared and adopted simultaneously, which might provide greater consistency between goals, policies and implementation, or as part of a multi-phase process. An intergovernmental task force should be charged with responsibility for developing the recommended approach, schedule, and substantive scope of a countywide plan.

There are three additional reasons for seeking improved coordination by means of a countywide plan. These include (a) the increasing number of precedents–i.e. countywide planning for specific problems; (b) increasing public demand for regional and sub-regional cooperation; and (c) the possibility of state-mandated regional government.

Building on Countywide Planning Precedents

Coordinated countywide planning is not a new concept. The state has increasingly mandated countywide planning over the last few years in a number of special areas, including toxic waste disposal (Tanner process), solid waste management (Countywide Integrated Waste Management Plan), and traffic congestion management (Congestion Management Agency). These approaches are more effective because there is a demonstrable need for cooperative planning and because the state has taken the lead in requiring local governments to meet defined objectives. Santa Clara County should continue its tradition of leadership by developing a more comprehensive countywide plan that builds upon existing precedents for cooperative planning.



■ Public Demand for Regional and Sub-regional Cooperation

A second practical reason for improving coordinated, countywide planning is that public opinion now solidly supports it to solve problems that have not been adequately addressed by individual jurisdictions. A 1991 Bay Area Poll indicates fewer than one-third of area residents think existing government structures are adequate to solve area-wide problems. A countywide plan can help transform public dissatisfaction with the status quo into a positive force for progressive government and private sector action.

■ Potential for State-Mandated Regional Governance

Any number of proposals have been developed by the state legislature to create some form of regional governance. If regional governance is created, its form and authority will not likely preempt the need for improved countywide planning on all issues and levels. Furthermore, Santa Clara County as a whole will be better positioned to respond to the requirements of the state and regional authorities created by state legislation if we already have a jointly agreed upon countywide plan.

COMPONENTS AND SOURCES OF A COUNTYWIDE PLAN

■ Sources and Contributors

A comprehensive, countywide plan would be derived from existing general plans of the cities and County, districts, and government agencies which produce and administer special function plans. County government has also since 1988 embarked upon a strategic planning program, Strategic Vision, which has documented trends affecting the future of the county as a whole in an attempt to identify key issues and strategies for meeting future challenges. Various intergovernmental forums, such as the Cities Association and Special Districts Association, could also contribute to the preparation and review of goals, strategies, policies and implementation.

However, it is important to note that of all the governmental entities which perform planning functions of one kind or another, only the County's general plan is comprehensive both in scope and in terms of geographic coverage. Combined with the results of the Strategic Vision program, the County's General Plan could provide a solid foundation from which to develop a countywide plan.

■ Components, or "Elements" of a Countywide Plan

The most critical components or "elements" to be included in such a plan are listed below:

- urban area and rural area development patterns;
- housing supply and affordability;
- open space and natural resource preservation;
- coordination of land use planning, urban design, and transportation system capacity, especially transit services;
- impacts of future levels of growth and development upon infrastructure capacity and levels of public services, particularly those types of facilities which are at or nearing peak capacity, such as sewage treatment plants, water supply, landfills, or others;
- local government finance, its effect on land use planning, and the need for reforms; and
- economic and employment development.

Other elements may warrant inclusion as the process evolves, or become spin-offs of the process. Creation and adoption of a countywide plan would not preclude, for example, a more extensive countywide economic development plan based upon the goals and strategies of a countywide plan. In addition, the county's Congestion Management Agency (CMA) is authorized by law to improve coordination of land use and transportation systems to achieve various traffic reduction objectives. Careful coordination with the CMA would be required in determining the scope of a countywide plan to avoid duplication.

IMPLEMENTATION APPROACHES

The effectiveness of a countywide plan depends primarily on its system of implementation. Routine implementation, the role of incentives and requirements, and dispute resolution must all be addressed as part of this system.

■ Routine Implementation

In order ensure participation by local governments, the plan would require adoption by the legislative or governing body of local jurisdictions. Local governments would then amend the general plans and special function plans to maintain consistency with the jointly adopted plan and to provide a legal basis for specific implementation, in accordance with state planning law.

Routine implementation would involve several types of actions:

- processes for referral, review and comment upon land use, development, or other decisions with impacts upon other jurisdictions;
- programs, studies, or other actions designed to achieve specifically agreed upon objectives; and
- a means of monitoring progress or lack thereof in order to review and update the plan.

Some goals or objectives might only require actions on the part of single jurisdictions or agencies, while some common objectives could well require a collaborative approach. The Golden Triangle Task Force, now the Congestion Management Agency, demonstrated such an approach.

■ Incentives

Initially, plan implementation could be sought through voluntary means, perhaps with incentives created to reward jurisdictions and compensate for the costs of programs, staffing, and other expenses. These incentives might include special revenues provided by the state as compensation for participation and achievements; another approach might be to enact reforms of our system of local government finance which support the goals and objectives of the countywide plan and achieve a more equitable distribution of local revenues. Incentive programs provide a measure of flexibility that strict state requirements may not; however, if voluntary efforts prove insufficient, state legislation may be needed to make the requirements of regional and sub-regional plans more binding on local jurisdictions.

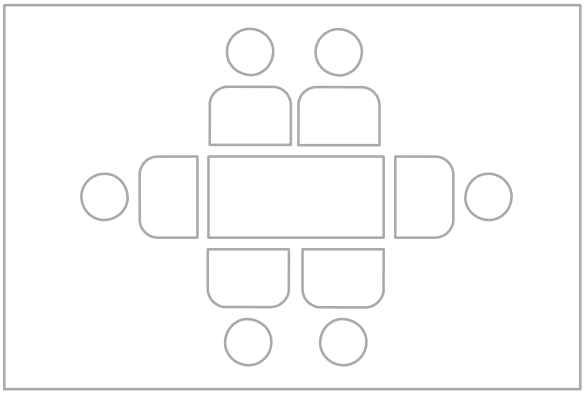
To foster the trend towards improved coordination and cooperative planning, there are several areas in which changes are needed:

- fostering consensus through the creation and adoption of a countywide or “sub-regional” plan;
- legislative actions needed to implement it at both the state and local levels; and
- demonstrating its effectiveness and long-term potential to the public in order to maintain a basis of support among citizens and local governments.

■ Dispute Resolution

No jointly developed plan can hope to resolve all possible issues or potential disputes between jurisdictions. In such cases, dispute resolution mechanisms must be available to provide jurisdictions with the means of seeking arbitrated agreements. The existing intergovernmental forums should play a major role in determining how to develop a dispute resolution process or mechanism.

[See also the Countywide "Governance Chapter" for further elaboration].



➔ Policies and Implementation

C-GD 43
A countywide plan for growth and development, infrastructure capacity, and preservation of natural resources should be prepared, adopted and implemented by the cities, County, and affected districts.

C-GD 44
A countywide plan should include a shared vision of the future of Santa Clara County, both its urban and rural environments, over the next 10-25 years that provides consensus on which to base subsequent implementation.

C-GD 45
Elements of a countywide plan intended to guide future growth should integrate the established system of growth management and staged, orderly urban expansion adopted by the cities, LAFCO, and the County. Those elements should include:

a. urban area and rural area development patterns;
b. urban housing supply and affordability;
c. open space and natural resource preservation;
d. coordination of land use planning, urban design, and transportation system capacity, especially transit services;
e. impacts of future levels of growth and development upon infrastructure capacity and levels of public services, particularly those types of facilities which are at or nearing peak capacity, such as sewage treatment plants, water supply, landfills, etc.;
f. local government finance and the need for local revenue sharing; and
g. economic and employment development.

C-GD 46
The specific means for preparing, adopting and implementing a countywide plan of this nature should be addressed by the cities, districts, agencies and existing intergovernmental bodies.

C-GD 47
Land use and development decisions of local governmental entities having area-wide significance or impacts on neighboring jurisdictions should be reviewed for consistency with a countywide plan for future growth and development.

C-GD 48
Implementation of a countywide plan should include a mechanism for resolving interjurisdictional disputes within the context of shared, countywide goals and policies.

C-GD 49
Countywide goals, strategies, and policies should be consistent with those of the State and regional agencies for growth management within the Bay Area.

C-GD 50
Broad public awareness and participation are deemed essential to the successful preparation, adoption and implementation of a countywide plan. Efforts to ensure public understanding and support of such a proposal shall be considered a high priority by County government and County agencies involved in the development of the plan.

C-GD 51
A countywide plan should ensure that the capacity of all major public facilities is consistent with long-term projected demand.

CW-GD 52
Closer coordination and cooperation should take place among the County, the cities, and the various special districts whose decisions and activities affect the county's future growth and development.

C-GD 53
Continued efforts on the part of service providers to combine resources, achieve economies of scale, and collectively develop needed infrastructure capacity should be encouraged.

C-GD 54
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.

C-GD 55
Coordination between school districts and cities should be improved to the extent necessary to resolve common problems stemming from urban growth and development.

C-GD 56
All public works projects and facilities proposed by any agency of County government shall be reviewed for consistency with the goals and policies of the General Plan.

Economic well-being

Countywide Issues and Policies

Summary C-1

Background C-1

Strategies, Policies and Implementation C-5

Strategy #1: Improve Workforce Education and Job Skills C-5

Strategy #2: Increase Employment Opportunities and Remove Barriers to Employment C-7

Strategy #3: Maintain a Favorable Business Climate C-8

Strategy #4: Improve Quality of Life for All Segments of the Population C-10

Strategy #5: Increase Economic Development Planning and Promotion C-10

Strategy #6: Plan, Provide, and Maintain the Urban Infrastructure C-11

Summary

The following assertions form the basis for the strategies, policies and implementation recommendations contained within the Economic Well-Being Chapter of the General Plan:

1. A healthy local economy is essential for all aspects of our future.
2. Our local economy is experiencing a number of fundamental structural changes.
3. Although our local economy has many underlying strengths, we cannot take its future health for granted.
4. Local governments in the county need to become more sensitive to the needs of business and more proactive in working with the business community to maintain and promote economic development.

The basic strategies proposed in this chapter of the General Plan for maintaining the county's economic well-being include:

Strategy #1: Improve Workforce Education and Job Skills
Strategy #2: Increase Employment Opportunities and Remove Barriers to Employment
Strategy #3: Maintain a Favorable Business Climate
Strategy #4: Improve Quality of Life for All Segments of the Population
Strategy #5: Increase Economic Development Planning and Promotion
Strategy #6: Plan, Provide and Maintain the Urban Infrastructure

Background

THE IMPORTANCE OF A HEALTHY LOCAL ECONOMY

A healthy local economy is an important and fundamental foundation to a high standard of living and overall quality of life. It provides employment opportunities and income for county residents (as well as residents of other nearby counties). It also provides the tax revenues needed for the provision of a wide range of public services and facilities, including police and fire protection, education and job training, health care, transportation, environmental protection, social services, parks and open space, etc. Without adequate tax revenues, these services and facilities suffer and the community's sense of security, health, prosperity, and overall well-being are diminished.

A CHANGING ECONOMY IN A CHANGING WORLD

For most of the past two decades, Santa Clara County has been blessed with a healthy, growing economy that has been the envy of much of the world. Over the past several years, however, the county's economy has been experiencing some difficulties. Some of these difficulties simply reflect a cyclical recession that has been experienced throughout the country and can be expected to lessen as the nation's economy improves. Some of our local economic problems, however, are related to more profound and longer lasting structural changes in the local, national, and global economies from which quick recovery and simple solutions cannot be expected.

STRUCTURAL CHANGES IN THE ECONOMY

Santa Clara County's economy is experiencing a number of basic structural changes with regard to its economic base and its workforce. Structural changes, as contrasted with short term cyclical changes, generally involve major, long term changes in fundamental conditions such as the mix of industries or employment

types, the way work is performed, the way businesses are structured, as well as other changes.

Some of the structural changes affecting our local economy mirror changes in the national and global economies; others are more unique to this area. All of them have significant implications that should be considered seriously by local governments, businesses, community leaders, and individuals concerned about the county's future.

STRUCTURAL CHANGES IN OUR ECONOMIC BASE

Among the structural changes affecting the county's economic base are:

- Many of the rapid-growth companies and industries of the 1970s and 80s are maturing and will not be creating new jobs as rapidly as they were in the past.
- Many large and mid-sized businesses are actively "downsizing" (i.e. reducing their number of employees) as long term strategies for reducing costs and increasing their competitiveness. This downsizing often involves eliminating the jobs of white-collar middle level managers and is accompanied by an increase in contracting out for goods and services previously produced "in house."
- Continued evolution toward a business services, corporate headquarters, and research and development based economy (with higher job skill requirements and fewer entry level jobs).
- Increased competition from other regions of this country and other countries seeking to attract our local companies to relocate and/or expand their operations outside this county.
- Declines in national defense spending may impact the employment levels and/or products produced by a number of businesses in the county.
- Increased difficulty in attracting and retaining skilled workers in this area due to high housing costs.
- The shift toward an information-based economy is allowing more workers to work at home, and even out of this area, and communicate with local businesses via computers and phone lines.

STRUCTURAL CHANGES IN OUR WORKFORCE

In addition to the structural changes listed above that are affecting the county's economic base, structural changes are also occurring within the local workforce, including:

- Increasing labor shortages due to declining numbers of people in entry level age groups; slower workforce expansion through increased workforce participation by women in the local population; and difficulty of attracting workers from other areas due to high housing costs.
- Projected growing gap between the skills and educational attainment of the local labor force and the education and skill levels needed by local high tech businesses.
- An increasingly more ethnically and racially diverse workforce.
- Increasing median age of the workforce, reflecting the increasing median age of the population at large.

STRENGTHS OF THE LOCAL ECONOMY

The structural changes outlined above have many significant implications for the county's future. Some of them pose potential threats to the county's future economic vitality, while others present both challenges and opportunities. While acknowledging the threats, it is also important to note that our local economy has a number of strengths which can be built upon to address these challenges. Among these strengths are:

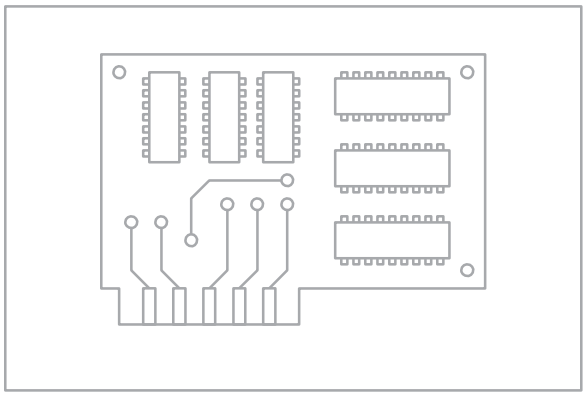
- an existing educated, skilled work force;
- a relatively diversified local economy composed of many future oriented industries;
- a strong local entrepreneurial tradition backed by more venture capital than is generally available in the other would-be "Silicon Valleys";

- a local high tech support infrastructure of specialized and unique business services not readily available elsewhere;
- proximity to educational institutions that provide opportunities to recruit graduating engineers and other specialized employees needed by high tech industries;
- many local companies that are already well integrated into the global economy;
- an increasingly multi-cultural local population that is likely to be more sensitive to and conversant with the global economy; and
- a physical setting and overall quality of life still makes this an attractive area to attract and retain businesses and workers.

As a consequence, despite the challenges we face, Santa Clara County is in many ways in an enviable position relative to many other parts of the United States and the world. Nonetheless, we cannot afford to take the future health of our local economy for granted.

INFLUENCES OF LOCAL GOVERNMENT ON THE LOCAL ECONOMY

Future economic conditions in Santa Clara County will be influenced by a number of different factors, many of which are beyond the control or influence of local governments. These factors include such things as international competition, tariffs and other trade restrictions, and state and federal regulatory, spending, and taxation policies.



Although state, federal, and global conditions generally receive the most attention when economic conditions are discussed, many activities and decisions of local governments have significant impacts, either directly or indirectly, on the local economy. Some of the ways local governments influence the local economy include:

- the provision of public infrastructure (e.g. roads, sewerage facilities, water supplies, etc.);
- land use planning;
- regulation and taxation;
- education and job training;
- economic development planning and promotion;
- lobbying on state and federal legislation that may impact businesses; and
- conveying a general attitude toward the importance of businesses in the community.

MAJOR CHALLENGES OF THE 1990S

In the late-1970s and continuing through most of the 1980s, Santa Clara County's major economic problem was that local businesses were creating jobs at a much faster rate than housing construction and transportation network expansion. As such, growth in local employment was often viewed as a mixed blessing that brought both problems and benefits to Santa Clara County. The term "jobs/housing imbalance" became a common catch phrase for referring to a number of complex and interrelated job growth, housing, transportation, and environmental problems, and limiting job growth was seen as one of the possible solutions to these problems.

While jobs/housing imbalance will continue to be a significant concern during the 1990s as part of a broader concern for balanced development, increasing attention is likely be paid to how to foster and encourage further economic development as the economic engine responsible for our employment growth cools down. Similarly, the apparent growing mismatch between the skills needed by our high technology companies and the educational attainment level of our local workforce is likely to get increasing attention.

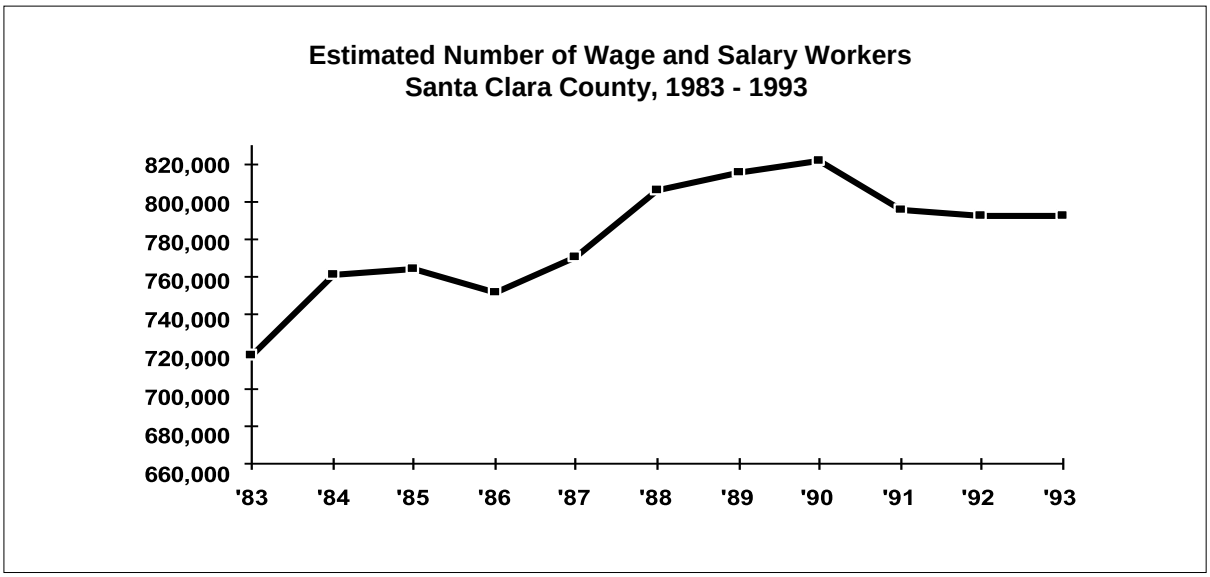
ADDING ECONOMIC DEVELOPMENT TO THE PUBLIC AGENDA

As a consequence of the underlying structural changes indicated above, Santa Clara County in the 1990s can no longer afford to take for granted the health of its local economy. Economic development considerations need to become a more significant part of the public agenda of local governments, taking its place along with the social and environmental objectives that have predominated in recent decades. This is not to suggest that economic considerations should or will always take precedence over social and environmental objectives, but simply that they should be considered more explicitly in public decision making processes that seek to achieve an informed and reasonable balance among social, economic, and environmental objectives.

More specifically, it means that local governments should give more careful consideration to identifying the conditions necessary to foster and maintain a healthy local economy, and to the individual and cumulative impacts their plans, policies, regulations, approval processes, taxes, and fees have on those conditions.

It means that, where significant economic costs are likely to be incurred as a result of proposed regulations, techniques such as risk assessment analyses and cost/benefit analyses should be used to provide input to the decision-making processes to enable decision makers to weigh more explicitly the potential public benefits against the probable costs of achieving those benefits.

It also means that local governments should work more closely with the business community in planning for, encouraging, and promoting economic development.



Strategies, Policies and Implementation

Strategy #1: Improve Workforce Education and Job Skills

Throughout the United States and especially here in high-tech "Silicon Valley", the education and job skills individuals need to successfully obtain and retain employment are constantly rising and changing. These rising and changing job skill requirements pose a challenge both to those who are or will be seeking employment and to the businesses who are seeking workers with the skills they need in order to compete effectively in the global market place.

A decade ago, when the rate of new job creation in the county remained high, concern regarding unemployment and underemployment focused on finding ways to help those who were chronically unemployed to obtain the basic job skills necessary to enter the employed workforce. Today, in addition to the chronically unemployed, we have three additional categories of people for whom improving our education, vocational training, and job retraining programs is important. These include:

- those who are currently still in school but are receiving an inadequate education that will not prepare them for the rising education and skill requirements of the job market they will someday be entering;
- those who are currently employed but whose job skills are becoming obsolete and may soon face unemployment; and
- those who, despite their job skills, have recently been laid off as part of long term corporate "downsizing" and who may be unable to find jobs in the fields for which they are trained due to a decline in the number of employment opportunities in their fields.

  (Unlike those in the other two categories who may be competing for lower paying blue collar jobs, many of the people in the third category will be white collar, middle management employees who held well-paying jobs with substantial fringe benefits but who now may have to accept lower paying jobs with fewer fringe benefits.)

Helping all of these people to obtain or retain productive, well-paying jobs will require a variety of approaches, including:

- improving the overall quality of education in our schools;
- making job training programs available to those who lack adequate skills or who wish to improve their skills to advance beyond marginal, low-paying jobs; and
- providing retraining programs for those whose job skills have become obsolete or who have lost their jobs due to a reduction in the number of jobs in their particular employment field.

Accomplishing this will be a significant challenge whose outcome will substantially affect the economic well-being not only of these particular people but also of the local businesses who are depending upon an educated, skilled workforce to meet increasing economic competition.

The success or failure of these education and job training efforts will also affect the local governments from whom these people will be requiring services and whose tax revenues will be impacted directly or indirectly by the incomes and expenditures of these county residents.

Policies and Implementation

C-EC 1
Job training and retraining programs should be expanded and focused to provide a better match between the skills of unemployed and underemployed residents and available jobs.

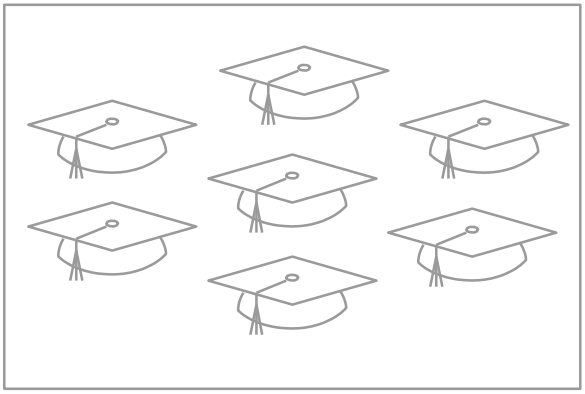
C-EC 2
The education system should be improved to better equip students with the knowledge, skills, and flexibility they will need to compete successfully in the job market.

Implementation Recommendations

C-EC(i) 1
Form a Cooperative Vocational Council (CVC) with the participation of managers of public and private job skill training programs, local private industries, high schools, community colleges, community based organizations and government agencies. The function of the CVC would be:

a. to act as coordinating agencies for public and private job skill training programs;
b. to eliminate unnecessary duplication of services; and
c. to review and approve the courses for curriculum quality, need and quality of services provided. (Implementors: Private Industry, Public and Private Job Skill Training Providers)

C-EC(i) 2
Augment existing programs designed to inform the unemployed of job training programs and employment opportunities available in the county. (Implementors: State Employment Development Department, Cooperative Vocational Council)



C-EC(i) 3
Develop a coordinated outreach program directed at secondary schools and beyond, to explain and emphasize job availability and educational background required to obtain employment in the county. (Implementors: Cooperative Vocational Council, Office of Education, Private Industry)

C-EC(i) 4
Provide an alternative to existing two-year community college curricula to provide skill training with certification within six months. (Implementors: Community Colleges)

C-EC(i) 5
Encourage the establishment of vocational training programs where none exist and in areas of high unemployment. (Implementors: Cooperative Vocational Council, County)

C-EC(i) 6
Encourage more active private sector use of work/study, and work experience programs to provide on-the-job training. (Implementors: Private Industry, Cooperative Vocational Council, County)

C-EC(i) 7
Expand industry sponsored and financed job training programs. (Implementors: Private Industry)

C-EC(i) 8
Encourage changes in public employment training funding policies to give a higher priority to vocational training programs. (Implementors: Cooperative Vocational Council, Department of Labor, County)

C-EC(i) 9
Continue to monitor the impact of job growth in reducing unemployment and underemployment in the county. (Implementors: State Economic Development Department, Cooperative Vocational Council, County)

C-EC(i) 10
Require job training operators to inform potential trainees of their specific program placement record and job availability before a commitment is made by the trainees. (Implementors: Private Industry, Public and Private Job Skill Training Programs, Cooperative Vocational Council, County)

C-EC(i) 11
Continue to offer "English as a Second Language" programs where funding is available. (Implementors: Public Schools, Private Non- Profit Foundations)

Strategy #2: Increase Employment Opportunities and Remove Barriers to Employment

Providing a diversity and sufficient number of employment opportunities for the county's growing population is important to the economic and social health of our community. Despite the general vitality our local economy has exhibited over the past two decades, many residents of our county remain unemployed or underemployed.

An overall economic well-being strategy for the county must include ways of reducing unemployment and underemployment. This involves not only efforts to improve the job skills of the unemployed and underemployed, but also efforts to assure that there are sufficient jobs available for which they are qualified. Education and job training programs for the unemployed and underemployed are of little benefit if jobs are not available for their graduates.

In an economy where education and job skill requirements are constantly rising, those with minimal job skills find it increasingly difficult to find employment. The jobs they are able to find generally provide only minimum wages and few, if any, benefits. Part of an overall economic development strategy for Santa Clara County should include investigation of potential ways to increase employment opportunities for those with lesser job skills. This may require exploration of whether and how to try to diversify our local economy.

In addition to providing a diversified and growing economy that is generating additional employment opportunities, it is important to remove barriers for those who wish to work but are prevented or discouraged from working due to various economic and other barriers. There are many unemployed people in Santa Clara County who would work:

- if they could find affordable housing near work;
- if they had adequate private or public transportation to enable them to get to and from work;
- if they could find inexpensive childcare conveniently located near their home or work place;
- if employment discrimination did not occur; or
- if physical barriers to those with special needs were removed.

The present land use patterns in the county which separate jobs from housing make it difficult for the job seeker, for example, who lives in East San Jose and does not own an automobile to get to jobs in the Palo Alto, Mountain View, Sunnyvale, Santa Clara, and even North San Jose areas. Similarly, inexpensive, conveniently located childcare is essential to single-parent households and households where both parents work.

Policies and Implementation

C-EC 3
Diversification in the mix of local industry should be encouraged in Santa Clara County to achieve a broader base of industrial and commercial activities in order to insulate the local economy from possible future economic downturns and to provide more lower skilled jobs.

C-EC 4
Employment opportunities for the unemployed, underemployed and older workers who prefer not to retire should receive high priority.

C-EC 5
Barriers such as inadequate housing, transportation and childcare facilities which prevent individuals from obtaining employment should be reduced or eliminated.

Implementation Recommendations

C-EC(i) 12
Retain and/or expand those jobs matching the skills of the locally unemployed, and improve opportunities for those underemployed. (Implementors: Private Industries, Cities and County)

C-EC(i) 13
Promote the continuation of agriculture and related employment as an active part of a diversified economy. (Implementors: County, Cities)

C-EC(i) 14
Reduce work impediments, such as inadequate public transportation, limited housing opportunities near places of employment, and expensive and limited child care facilities with the following measures:

1. Locate new jobs in or near areas of high unemployment. (Implementors: Cities, Private Industry)
2. Improve transit service between areas of high unemployment and existing and new jobs. (Implementors: Santa Clara County Transit District, CalTrans, Private Industry)
3. Facilitate construction of new housing for low and moderate income households to increase the opportunity for people seeking work to live near their place of employment.
4. Promote alternative modes of work, such as shared jobs, and jobs with reduced or flexible work hours. (Implementors: All Employers)
5. Adopt policies which are consistent with existing anti-discrimination laws. (Implementors: Cities, County, State and Federal Government Agencies)
6. Encourage the establishment of industrial child care programs by employers as a means of providing low cost and/or convenient child care. (Implementors: Private Employers)
7. Re-evaluate governmental regulations and restrictions which inhibit the establishment of child care centers. (Implementors: County, Cities)

Strategy #3:
Maintain a Favorable Business Climate

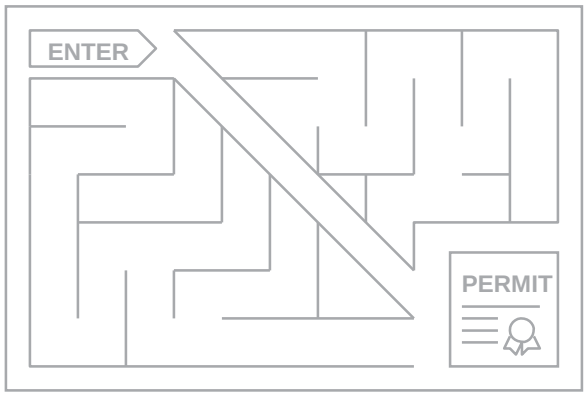
The overall business climate of a community affects both (1) its ability to attract and retain businesses that provide employment for local residents and tax revenues for local governments, and (2) the economic competitiveness of the businesses located in that community.

The "business climate" is made up of a number of different tangible and intangible components, including regulatory policies and processes; taxation and fee structures; availability of appropriately planned land and infrastructure; availability of a skilled workforce and necessary support services; and general perceptions by businesses of the local governments' sensitivity and responsiveness to their needs.

Although Santa Clara County has a number of important assets that will continue to make it an attractive location for businesses, local governments cannot afford to ignore the impacts on businesses of their plans, policies, regulations, approval processes, fees, and perceived attitudes toward business.

If Santa Clara County is to retain its healthy economy and continue to contribute to the nation's economic competitiveness, local governments must pay more attention to the overall climate they are creating for business.

In a world where economic competition is becoming increasingly more intense, the need for businesses to be able to get new products developed and marketed quickly and to hold down production and operating costs is becoming an ever more important factor in our ability to compete successfully in the global marketplace. Delays in getting permit approvals from government agencies can sometimes prevent businesses from getting new products into the marketplace ahead of their competitors.



Government efforts to improve the climate for businesses should include, among other things:

- reviewing local regulatory and approval processes to see where unnecessary and costly delays can be removed without sacrificing the quality of the review process nor the objectives for which the regulations and approval requirements were established;
- considering more explicitly the potential costs and benefits of proposed new regulations that may impose significant costs upon businesses;
- establishing performance standards for achievement of environmental protection or cleanup goals, rather than mandating the use of particular technologies;
- adopting sunset clauses for periodically reviewing new regulations to determine whether they are still needed and whether they have been effective;
- providing mechanisms for dissemination of information concerning inexpensive pollution control and cleanup technologies; and
- establishing programs to facilitate communication and joint problem solving among public agencies and private businesses.

While businesses of all sizes are affected by the cumulative impacts of government actions, small and mid size businesses are often disproportionately impacted because they have fewer resources to devote to understanding and complying with the growing number of local, state, and federal laws and regulations.

Because public attention most often focuses on economic news involving the Valley's larger, nationally and internationally known companies, the important roles, contributions, and needs of small and mid size businesses in the county are often overlooked. In 1988, over 97% of the more than 38,000 businesses in Santa Clara County were small or mid size businesses with fewer than 100 employees. Collectively, these businesses account for approximately half of the private sector jobs in the county. (The percentage is even higher when self-employed individuals are included in the analysis.)

These small and mid size businesses provide goods and services to community residents and to larger market areas. They also provide specialized services and supplies to this area's high tech companies that often are not readily available elsewhere (thus helping to retain these companies in this area). In addition, they include many of the high tech startup companies that are involved in developing new technologies and new products that will enable them to prosper and grow to become larger companies, providing additional wealth and employment for both our local and national economies.

➔	***Policies and Implementation***

C-EC 6
Local governments should work to maintain a favorable climate for businesses.

C-EC 7
The potential impacts on businesses of all sizes should be considered in developing local government plans, policies, regulations, approval processes, and fees.

Strategy #4: Improve Quality of Life for All Segments of the Population

Santa Clara County faces increasing national and international competition to attract away our successful businesses and members of our talented workforce. One of the factors affecting the future health of our local economy will be how well we succeed in retaining these businesses and workers.

One of Santa Clara County's major strengths in attracting and retaining businesses and creative, skilled workers is the overall quality of life in the county and the Bay Area. Despite our high housing costs and various other problems, this area remains a very attractive place to live and work. The quality of life experienced by all segments of our population is an important asset we must work to protect and improve if we are to maintain our economic well-being.

Quality of life is a broad concept that may have different meanings to different people, but generally includes such things as a prosperous growing economy, an attractive physical setting, a healthy natural environment, affordable housing, good schools, convenient transportation, recreational and cultural amenities, efficient public services, safe communities, a benign climate, as well as others.

Many of these quality of life attributes are present in Santa Clara County and the Bay Area. Each of these attributes is important not only for its own intrinsic benefits, but also for its contribution to preserving our competitive advantage in attracting and retaining innovative businesses and a creative workforce.

Policies and Implementation

C-EC 8
Local governments, as part of an overall economic development program, should work to maintain and improve the overall quality of life in Santa Clara County by:

a. increasing the supply of affordable housing;
b. improving our transportation network and facilitating alternative transportation modes;
c. improving the quality of our schools;
d. providing an adequate system of public parks and open space lands;
e. maintaining a healthy environment;
f. providing a diversity of cultural and recreational opportunities;
g. providing adequate and efficient public services; and
h. maintaining the beauty of our physical setting.

Implementation Recommendations

See implementation in appropriate chapters of this General Plan.

Strategy #5: Increase Economic Development Planning and Promotion

Over the last two decades, Santa Clara County's economy has been driven by a unique combination of ingredients and events that led to the creation and success of "Silicon Valley." These ingredients included:

- access to engineering talent at nearby universities;
- availability of venture capital;
- a special entrepreneurial and creative spirit in our workforce;
- important breakthroughs in technology;
- a support infrastructure of specialized business services;
- an ability to attract a talented workforce from around the United States and around the world; and
- a lack of serious competition from other areas with similar assets.

In the changing global economy, of which we are now inextricably a part, some of the ingredients that previously contributed to our local economy's success are no longer unique to this area and the formula that worked so well for us in the past may not work as well in the future.

Given these changing conditions, local governments, businesses and community leaders in Santa Clara County should begin a conscious process to:

- review our county's potential future role(s) in the global economy;
- identify the factors that can contribute to (or threaten) our future economic success; and
- develop action plans that will enable us to capitalize on our strengths and overcome our weaknesses.

These efforts may lead us to a realization that, unlike the past when we were able to rely on our unique advantages to bring economic success to the county, in the future we may have to become more proactive to achieve it.

➔ *Policies and Implementation*

C-EC 9
Coordinated countywide economic development planning and promotion efforts should be increased.

C-EC 10
The County shall play a leadership role in encouraging and facilitating coordinated countywide economic development planning.

Implementation Recommendations

C-EC(i) 15
Establish a countywide Economic Development Council (EDC) with representation from private industry, business organizations, labor, the cities, and the County. (Implementors: Private Industry, Business Organizations, Labor, Cities, County)

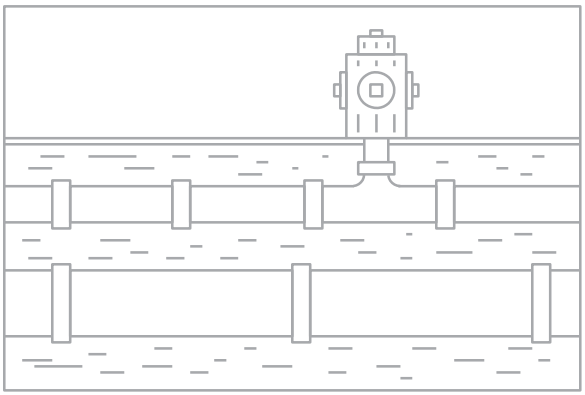
C-EC(i) 16
Prepare a countywide economic development plan. (Implementors: Economic Development Council)

➡ *Strategy #6: Plan, Provide, and Maintain the Urban Infrastructure*

The economic health and the social well-being of a community is often reflected in the quality of that community's public infrastructure, including its roads and highways, public transit systems, sewer and sewage treatment systems, water distribution systems, schools, parks and recreation areas, libraries, and other public buildings. Adequate public infrastructure is an important and essential foundation for a healthy economy.

By any number of indicators, maintenance and expansion of public infrastructure in Santa Clara County, the rest of California as well as much of the nation, is not keeping pace with growth or with the deterioration of existing facilities. Continued failure to make the investments necessary to maintain and expand these systems will inevitably inhibit the healthy functioning of our economy and erode the general quality of life in our communities.

The general responsibility for planning, financing, expanding, and maintaining our community infrastructure lies with a variety of public agencies at the local, state, and federal levels. The private sector also has significant roles and responsibilities with regard to infrastructure. The private sector, for example is often required to construct and/or pay impact fees related to the infrastructure necessary to support new residential, commercial, and industrial development.



A major factor currently limiting the ability of local governments to adequately maintain and improve existing infrastructure is the absence of sufficient revenues and funding sources. If local governments are to obtain these needed revenues, they will need the cooperation and assistance of the private sector to obtain voter approval of local funding measures such as sales tax and bond measures, as well as for reform of state laws relating to the funding of local governments. Without such changes, the revenues available will not match the magnitude of the task.

➔	***Policies and Implementation***

C-EC 11
Local governments should adequately plan for infrastructure improvements needed to accommodate planned growth.

C-EC 12
Infrastructure improvement plans should be consistent with local growth management and land use plans.

C-EC 13
Existing infrastructure should be adequately maintained.

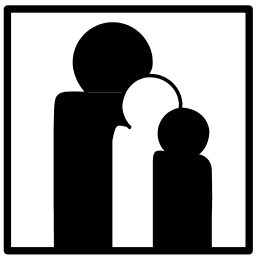
Implementation Recommendations

C-EC(i) 17
Capital improvement plans for the construction and maintenance of community infrastructure should be prepared and periodically reviewed and updated to assure consistency with anticipated growth and with local land use plans and policies. (Implementors: Public agencies)

C-EC(i) 18
The private sector should work cooperatively with the public sector to assure adequate revenues to finance the construction, maintenance and expansion of community infrastructure. (Implementors: Private Sector; Public Agencies)

Social Well-Being

Countywide Issues and Policies



NOTE: The Social Well-Being Chapter of Part 2, Countywide Issues and Policies, of Book A of the Santa Clara County General Plan has been superseded in its entirety by the Health Element, Social and Emotional Health Section.

(Amended Aug. 25, 2015; File#: 10184-11GP).

Housing

Countywide Issues and Policies

NOTE: The Housing Chapter of Part 2, Countywide Issues and Policies, of Book A of the 1995-2010 Santa Clara County General Plan has been superseded in its entirety by the County of Santa Clara Housing Element Update 2015-2022.

The Housing Element Update is Appendix 4, Part 6, Book B of the General Plan.

(Adopted June 10, 2014. File 7764-10GP).

Transportation

Countywide Issues and Policies

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Strategy #3: Expand System Capacity and Improve System Integration F-20

Strategy #4: Support New Transportation Technologies F-31

Summary

An adequate transportation system is essential to Santa Clara County's economy, environment, and overall quality of life. The strategies, policies and implementation measures supported by this General Plan improve the adequacy of the overall transportation system by ensuring that it is balanced, well-integrated, and sufficient to meet current and future mobility needs.

The transportation system should help achieve a unified, comprehensive vision of the county's desired future, such as that expressed in this Plan. In fulfilling that role, it is especially important that it:

- reinforce the County's overall strategy for accommodating future growth through compact urban development;
- help improve air quality and reduce energy use;
- support the rejuvenation of existing urban centers and contribute to cities' redevelopment plans;
- maximize the use of existing urban infrastructure investment; and
- improve social and economic well-being.

A major goal of the strategies and policies of this chapter is to encourage the use of transportation alternatives to the single-occupant vehicle, through public transit, ridesharing, bicycling, and walking—for both work and non-work trips. If implemented, these strategies and policies will reduce traffic congestion and enhance the overall accessibility of goods, services, and employment. They will furthermore ensure equality of access to transportation for all members of the community, including children, youths, seniors and others, regardless of physical, psychological or economic abilities.

RECENT EFFORTS TO IMPROVE THE TRANSPORTATION SYSTEM

Over the last 10 years, policy related to transportation has focused on abating peak-hour congestion and safeguarding air quality. Plans emphasized meeting the transportation needs of workers and increasing transit alternatives. In recent years, the county has, through a number of programs, made significant progress toward alleviating congestion and providing enough transportation facilities to accommodate future growth as well. Among these accomplishments were:

- In 1984, voters approved a county-wide half-cent sales tax to improve Highways 101, 85 and 237.
- The Countywide Transportation Plan, T-2000 was completed in the late 1980s, outlining a multifaceted, coordinated approach to meeting mobility needs primarily through greater investment in transit.
- The County improved the level of service and expanded the system of bus routes, added express buses and, in 1991, completed construction of the Guadalupe Corridor light rail transit system.
- The former Golden Triangle Task Force began efforts to expand the number of employer-based transportation management programs, as well as to increase the supply of housing closer to jobs.
- In 1990, the Congestion Management Agency was formed to prepare the County's Congestion Management Program. The primary purpose of the Program is to reduce congestion, improve mobility and safeguard air quality.
- In 1992, voters approved Measure A, continuation of the half-cent sales tax originally approved in 1984, to fund some of the transportation improvements outlined in the updated Countywide Transportation Plan, T-2010.
- Also in 1992, Caltrain service was extended to Gilroy.
- Finally, in 1995 legislation took effect which merged the Congestion Management Agency and the former County Transit District.

POTENTIAL FOR FUTURE CONGESTION

Despite these and other efforts, the county could still experience increased congestion in future years. Only 3% of all employed workers use public transit (bus, light rail, Caltrain) to get to work and fewer than 19 percent either work at home, rideshare, bike or walk. According to the 1990 Census, almost 78% of all employed residents drive alone to work. If principal reliance on single-occupancy auto travel continues, growth in employment and population over the next two decades could mean levels of peakhour congestion worse than that experienced during the mid-1980s.

NEED TO INCREASE TRAVEL ALTERNATIVES

For many reasons, continuing to build roads to accommodate the growing number of vehicles is no longer an option for meeting our future transportation needs. Action must take the form of a multifaceted, coordinated approach to reduce our reliance on the private vehicle — an approach that stresses compact, mix-use land development, improvements to the transit system, and enhancements to the efficiency of our existing road system by managing demand for those facilities through such measures as ridesharing, telecommuting and alternative work hours.

STRATEGIES FOR SAFEGUARDING FUTURE MOBILITY

Accordingly, this chapter sets forth the following major strategies for safeguarding future mobility in Santa Clara County. The overall objective of these strategies is to increase transportation alternatives to the private vehicle.

Strategy #1: Develop 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.

Each of the four major transportation strategies varies in terms of ease of implementation and time horizon. For example, Transportation Demand Management (TDM) strategies are of short-term nature, relatively inexpensive, easy to implement, and require little time before benefits can be realized. On the other hand, re-shaping our landscape to support the use of commute alternatives is a long-term transportation strategy. Though this strategy may have the greatest long term benefits, it will take one or two decades before they are realized. Increasing capacity on roadways and transit systems is a mid-range strategy that falls somewhere between implementing TDM programs and reshaping our urban landscape.

Background

An important aspect of understanding the transportation needs of Santa Clara County is an assessment of the major changes in its population, household, economic and social characteristics. The nature and location of our work, our families, where and how we live are all changing and these changes affect travel frequency, mode of travel and destinations. Our transportation system must be responsive to these changes if it is to continue to provide a high level of service to all county residents.

This section discusses some of the important characteristics of our population, economy, households and travel behavior that influence the transportation system. In addition, it describes some of the recent efforts to reduce congestion, as well as transportation's link with air quality and energy conservation.

MAJOR FACTORS INFLUENCING TRANSPORTATION NEEDS

■ Population Growth

Changes in the size, composition and location of the County's population will influence the characteristics of future travel demand and will be important determinants of future capital investment requirements. The County's population is estimated to grow by 15,000 to 20,000 annually between 1990 and 2010, to approximately 1.7 to 1.8 million people.

Some areas of the County will experience more growth than others. Seventy-seven percent of the population growth will be in the eastern and southern portions of the North Valley — San Jose alone will account for the remaining 29%.

■ Increasing Cultural Diversity

Continuing immigration from Asia and Mexico as well as higher than average fertility rates for Latina women will increase the cultural diversity of the county's population so that by 2010 there will be no ethnic majority. Cultural background does affect travel behavior, but the effect has not been studied adequately. Language alone can present a barrier to the use of travel alternatives such as ridesharing, or transit. More information on culturally differentiated travel patterns is needed to adequately meet the needs of an ever-growing immigrant and/or non-English-speaking population.

■ Aging of the Population

The most significant age-related change will be the tremendous increase in the number of people over age 65. The number of seniors will increase by 53% and they will make up 13% of the total population by 2010. More significantly, the number of seniors age 85 and over will increase by 50% to over 20,000. Most seniors over 85 are frail, require help with daily activities and about 1 in 4 require skilled nursing care. An increasing number of frail seniors presents a significant challenge to providers of transportation services in that frail seniors have a need to remain independent, but are unable to drive their own cars. More frail seniors will create added pressure to increase paratransit services.

The working age population between 15 and 64 will grow modestly, about 28% and will be more mature as well as more diverse. The workers in 2010 will represent a multitude of cultures, languages, traditions and backgrounds: fortyeight percent of them will be white; 26% Latino; 23% Asian; and 3% Black.

■ Increasing Persons per Household and Workers Per Household

After decades of decline, the number of persons and the number of workers per household increased between 1980 and 1990. Persons per household increased from 2.76 to 2.81, a result of the continuing immigration of Mexicans and Southeast Asians, who typically have more children and live in extended family or multiple family households. Workers per household increased from 1.44 to 1.54 a result of two phenomena: more women with children working and increasing diversity. The increasing number of working adults per household has significant implications for transportation planning. More cars per household leads to more trips, both work and non-work.

■ Employment Growth

Total employment is expected to increase more slowly than in the past two decades. Employment will increase steadily at a slow rate through 2010 to a total of 1.10 million jobs. By that year there will be 244,320 more jobs than there were in 1990. Forecasts by city indicate that San Jose and Milpitas, located on the eastern edge of the County, will receive the greatest number of new jobs. It is expected that the number of jobs in these cities will exceed that in the northern cities of Palo Alto, Mt. View, Sunnyvale, and Santa Clara. South County will experience a sizable increase in employment. Between 1990 and 2010 the number of jobs will increase by about 45,000.

■ Origins of Our Commuters

The number of workers from nearby counties as a percentage of all workers in Santa Clara County increased from 12% to 18% between 1980 and 1990. In-commuting from Alameda County alone increased 90% between 1980 and 1990, from 27,474 commuters to 52,449.

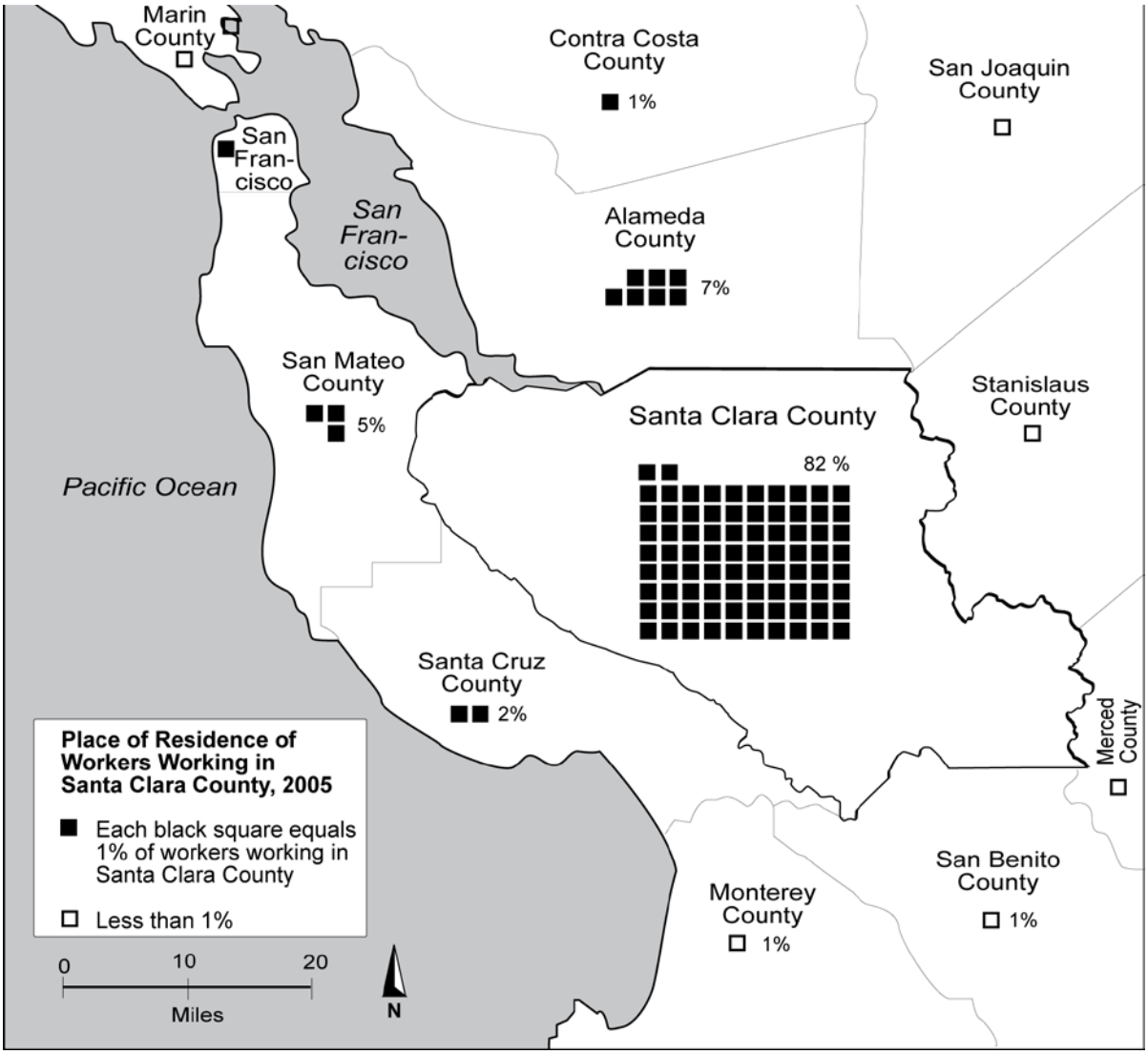
In 2010, it is estimated that about 198,000 workers will be commuting from adjoining counties, mostly Alameda and San Mateo.

Congestion on certain gateways for in-commuting workers may worsen even more significantly than those for intra-county commuters. The impact of the growing in-commute dramatically increased freeway volumes at the gateways into Santa Clara County. According to Caltrans, daily traffic

volumes on freeways between the East Bay and Santa Clara County increased by 57% from 1983 to 1989. As a result, no additional capacity exists on Highways 880 and 680 at the county line.

■ Decentralized, Low Density Development

The existing patterns of land development in Santa Clara County has literally forced nearly every worker to drive — usually alone. The existing land use patterns has also made it a necessity to own and be able to drive a car, no matter how impoverished. Santa Clara County's suburban land development pattern has, until recently, not been conducive to the use of transit. The county is characterized by an abundance of employment "nodes", or concentrations of jobs, throughout the county. The largest number of employment nodes are located in the northern part of the county in an area labeled the "Golden Triangle" bordered loosely by Highways 101, 237 and 880. However, residential areas are located west, south and east of this major concentration of employment. This requires workers to travel long distances to their jobs.



■ Lack of Investment in Transportation Alternatives

Until the mid-1980s, there were few, if any, travel alternatives to the single-occupant vehicle. In 1975, the infant bus system consisted of 236 buses and Caltrain operated 44 trains on its San Jose to San Francisco route. Open land continued to be developed in sprawling, low-density subdivisions requiring residents to own their own vehicle. The lack of transportation alternatives combined with rapid growth in employment and population and a downturn in investment in transportation facilities resulted in unprecedented levels of congestion during the mid-1980s.

In response to widespread support for transportation improvements, much progress has been made during the last 15 years to increase the number of transportation alternatives. For instance, the Guadalupe Corridor light rail was completed, the bus system was expanded to 80 routes and 19 express routes. CalTrain has been upgraded and service has been extended south to Gilroy. And, more employers are implementing TDM programs which assist workers interested in ridesharing or using transit. Despite all these improvements, much more is needed to improve mobility.

AUTOMOBILE OWNERSHIP AND USE

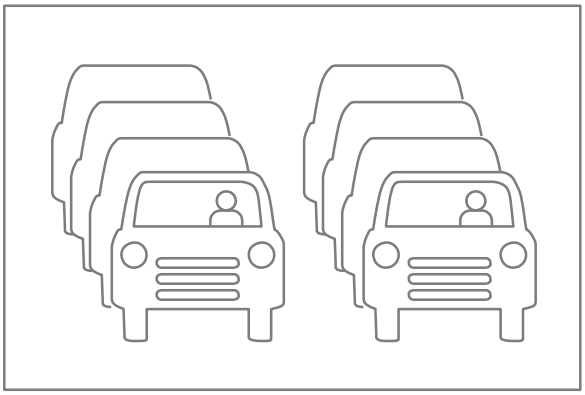
The number of automobiles owned per household is influenced by the land use densities and availability of transit. But the increasing availability of automobiles and their relatively inexpensive operating costs also affects the use of alternatives to the single occupant vehicle (SOV).

Auto ownership per household in Santa Clara County has steadily increased from 1.43 in 1940 to 1.99 autos per household by 1990. Though MTC estimates that it could increase further to 2.13 autos per household by 2000, there are reasons to believe it could decrease. Households in other areas of the Bay Area region have fewer autos, partly because of the compactness of development there as well as smaller household sizes and easily accessible transit, but also because parking is limited and expensive in areas developed at higher densities. As Santa Clara County becomes more compactly developed and transit becomes more readily available to travelers, the need for private autos will decrease.

■ Travel Behavior

Travel behavior is influenced by the interplay of many factors. Among these are availability of travel options and their relative cost, speed and convenience, distance of travel, and household characteristics. In 1990, nearly 78% of work trips by county workers were in single-occupant vehicles. This relatively high rate is due primarily to the lack of alternatives.

Transit is not economically feasible in suburban communities developed at low densities. As the county densifies and more travel options, transit, ridesharing, telecommuting , become available, the share of workers who drive alone is likely to decrease. In 1990, slightly less than one in four workers (22%) used an alternative to the single-occupant vehicle; 12.3% carpooled, 3% used transit, 2.5% worked at home, 2.1% walked, and 1.5% rode their bikes. The Countywide Transportation Plan has developed a program of transportation improvements to achieve, by 2010, a goal of 35% of all work trips via a form of transportation other than driving alone.



■ Growth in Non-Work Trips

County-wide, three out of every four workday trips are non-work trips and more than 60% of peak-period trips are non-work trips. Over the past 15 years, the number of non-work trips has grown significantly faster than the number of work trips.

Growth in work trips will slow significantly while growth in non-work trips will continue at current rates now that the growth in the size of the workforce is slowing down. Reasons for the growth in non-work trips include: changes in household composition, changing lifestyles, the decentralization of development, and more autos per household. People are eating out more often, participating in more recreational activities, and visiting out-patient clinics more. Work and non-work trips are shorter and are more likely to occur in single-occupant vehicles. The number of non-work trips made by females grew faster than that for males since women continue to maintain traditional household duties despite being fully employed outside the home.

Most non-work trips are actually separate legs of a multiple-destination trip. Most commuters make intermittent stops during their journey to or from work for such purposes as getting gas, eating, banking, shopping, recreating and picking up children from child care. For instance, at least 15% of all workers have the responsibility of transporting their children to child care or school during the week. Because child care is not located along transit routes or employment centers, parents drive an average of 6 miles out of their way each day to access childcare. In addition, these workers are less likely to use transit, since that would necessitate multiple transfers. It is because of the need to make these stops that most people are unable to take transit or rideshare.

TELECOMMUTING TRENDS

Telecommuting, the performance of work at home , is emerging as a feasible option for reducing the total amount of travel because of two fundamental societal changes. First, information workers now make up a considerable portion of the labor force. For them, being at the workplace to perform work functions, is not necessary. Second, advances in telecommunication technologies have made “location-independent” work feasible and cost-effective. This trend, combined with the increasing availability of affordable home computers and modems, and increasing time delays during peak commute hours has increased the tendency of workers to work from home.

Information workers comprise almost 60% or more of the labor force in California. In Santa Clara County, over 60% of all adults use a computer regularly or sometimes while more than 45 percent of Santa Clara County adults use a home computer. Therefore it may be feasible to institute telecommuting programs in most local businesses.

Telecommuting first received attention as an energy conservation measure during the late 1970s. A study prepared for the California Energy Commission indicated that telecommuting had significant potential for mitigating both travel demand (particularly peak demand) and fuel consumption in the state, resulting in an annual reduction of up to 30 billion passengermiles of travel and 700 million gallons of fuel by the year 2000.

In 1990, to evaluate the possible benefits of home telecommuting as a transportation management strategy, the State of California conducted a State Employee Telecommute Pilot Project. The study offers strong empirical support for telecommuting as a means to mitigate traffic congestion and improve air quality.

Telecommuting

Telecommuting is working at home or at an alternate location and commuting to the usual place of work using electronic or other means, instead of physically traveling to a more distant work site (State of California Telecommuting Advisory Committee proposed new definition). Telecommuting need not involve telecommunications at all. The employee reading and writing at home all day, without using the telephone, can be telecommuting just as surely as the employee who is on-line to a mainframe for six or eight hours.

Home-based Telecommuting

Home-based telecommuting includes people who work full-time at home, as well as those full-time people who split their time between home and a conventional office. People who work part-time at home and who may or may not make use of two locations are also included. Various forms of working at home and their impact on congestion and air quality are as follows:

- Running a home-based business as one's only job. Reduction of commute travel depends upon whether the alternative is:
  a. no job or
  b. a conventional job involving a commute.
- Moonlighting from home — does not reduce commute travel.
- A salaried employee working at home after hours — this does not reduce commute travel.
- A salaried employee working at home in lieu of in-office work will reduce commute travel if the alternative to working at home is to work in a conventional office.

Non-home-based telecommuting

A telecommuting center is a site, other than the home, from which the employee works instead of traveling to a more distant central work location. There are several kinds of telecommuting centers:

- Satellite Centers — (also referred to as "back offices" or "branch offices") — are typically set up by large businesses for use exclusively by their own staff. They are most often used by clerical workers although many examples of branch offices for lawyers and other professional and technical persons also exist. Travel to these locations will often be much less than to a central business district location for many employees, depending on how it is located and how the people assigned to it are selected.
- Local Centers — are buildings that provide office space for workers from a variety of different firms. A local center can be a single building or a cluster of buildings. It may offer special telecommunications facilities, some of which, like a video-conferencing room, may be shared by several of the building's tenants. Many of the office parks commonly found in suburban areas fit this definition.
- Neighborhood Centers — are similar in concept to local centers but are typically much smaller (ten to twenty people) in size.

Non-home-based telecommuting, may not have the same air quality and traffic reduction benefits as home-based telecommuting. Travel to a telecommuting center would likely involve a vehicle trip, thereby creating significant emissions (a typical five-mile trip generates 61% of the hydrocarbon emissions of a typical 20-mile trip, since a high proportion of the emissions occur during the "cold start", the first few minutes that the engine is running).

The congestion and air quality impacts of nonhome- based work types are as follows:

- Working from a center closer to home than the primary office will reduce commute travel, but may not have positive air quality impacts unless the trip distance is reduced by 70%.
- Field work: e.g., making sales or service calls, or collecting data, at one or a variety of locations other than the primary office, may or may not reduce commute travel. Depends on whether or not the work is location independent. If it is location dependent, then it will not reduce commute travel.
- Working while traveling— does not reduce commute travel.
- Managing a branch office—does not reduce commute travel.

Estimates of Telecommuting

It is difficult at best to estimate the numbers of people who are telecommuters. An estimated 23.3 million Americans performed some or all of their job-related work at home in 1987. According to the Census, about 2.9 million people used a computer at home for job or business-related activities in 1988. This is 2.7 percent of the employed U.S.

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population eighteen years and over. Some of these people are telecommuters; others must be considered potential telecommuters, who are working extra hours on the computer at home. Between 1980 and 1990, the number of people who worked at home (excluding farmworkers) increased from 1.2 million to 3.4 million. Some analysts estimate that by 2030, there will be 60 million telecommuters. In Santa Clara County, the percent of employed workers who worked at home increased from 1.6% in 1980 to 2.5% (about 20,000) in 1990.

RECENT EFFORTS TO REDUCE CONGESTION

The amount of travel during the morning peak hour (roughly 6 am to 9 am) will increase by 20% between 1987 and 2000. Though there will be more people making more trips, congestion is expected to decrease. The expected decrease in congestion on freeways is due mostly to the road improvements made on Highways 101, 85, 280, 880, 87 and 237 during the late 1980s and early 1990s.

Long term congestion trends, as indicated in T-2010, are expected to increase. There have been a number of recent efforts to respond to the growing levels of congestion. They include:

■ Transportation 2000 (T-2000) and 2010 (T-2010)

Assembly Bill 3705 authorized counties to develop County-wide Transportation Plans. The County of Santa Clara's County-wide Transportation Plan, T-2010, (the first update of T-2000) outlines the transportation improvements that are needed to accommodate future growth, minimize environmental impacts, improve the efficiency of the existing transportation system and achieve a 35% commute alternatives goal. This plan calls for a comprehensive, coordinated approach to meeting the county's transportation needs and emphasizes transportation demand management and improvements in transit balanced with investment in highways and expressways.

■ Golden Triangle Task Force (GTTF)

The Golden Triangle Task Force (GTTF) was convened in 1985 by the Santa Clara County Manufacturing Group to consider how cities and the county working together could address traffic congestion. The Task Force represented the five most urban cities in the county: Milpitas, Mountain View, Palo Alto, San Jose and Sunnyvale. It developed four objectives to achieve better balance between employment and housing and the transportation system in the Golden Triangle area. These objectives were: reduce the number of cars on roadways during peak commute hours; increase capacity of the transportation system; increase the amount of housing close to jobs; and limit development to areas for which there is adequate transportation infrastructure either in place or planned.

The major achievements of the GTTF included the rezoning of industrial land within the Golden Triangle to residential, the creation of support for a uniform Transportation Demand Management program and an organization through which to develop sub-regional transportation and land use plans for the purpose of congestion mitigation. This organization later became the Congestion Management Agency and the Commuter Network.

■ The Santa Clara County Congestion Management Agency (CMA)

The Santa Clara County Congestion Management Agency (CMA) was formed in 1990 in response to Proposition 111, which required urbanized counties to prepare a Congestion Management Program (CMP). The purpose of the CMP is to reduce congestion on selected segments of the county's roadways, (see map of the CMP system), improve mobility and safeguard air quality. The CMP will work to accomplish these goals through a combination of roadway and transit capital improvements, improved land-use planning, trip reduction and travel demand management programs, and transit service improvements.

The CMP furthermore provides a forum through which the Cities and the County can cooperatively work towards forging solutions to

region-wide traffic congestion and air quality problems. To meet the requirements of the legislation, Santa Clara County's CMP was developed to conform to the Regional Transportation Plan. In addition, the CMP conforms to the transportation-related provisions of the federal and California Clean Air Acts.

■ Measure A - 1984

In 1984, county voters approved a one-half-cent sales tax, Measure A, to raise $1 billion for improvements on three regional roadways, Highways 101 and 85 and Route 237. Since then, high occupancy lanes have been added to these roadways and have greatly expanded their capacity. As a result, congestion has decreased considerably.

■ Measure A - 1992

In 1992, voters were asked to extend the half-cent sales tax to raise an additional $1.9 billion (1992 dollars) for rail transit, express bus transit, highway and expressway improvements. These improvements include expanding the light rail system, upgrading service on CalTrain, adding 30 new super express buses that will connect neighborhoods with major employment centers and improving the highway system through interchange improvements and road widenings. The Local Transportation Authority will leverage the sales tax revenues to attract the state and federal funding necessary to complete the planned improvements.

The measure passed, but not with a two-thirds majority, prompting a legal challenge by opponents of the measure. Aas of the end of 1994 a decision was still pending by the Supreme Court.

■ 1995 Merger of the CMA and County Transit District

In 1994, voters approved a proposed merger between the County Transit District and the Congestion Management Agency, effective January 1, 1995. The merged agency will be directed by a new governing board, separate from County Government, and is intended to provide for more effective transportation planning and land use coordination. The formal name of the merged agency is the Santa Clara County Transit District, or "Transit District," as it will be referred to in the General Plan.

ROLE OF THE COUNTY GENERAL PLAN

One of the major roles of the County's General Plan is to place plans and policies for the county's transportation system in the context of achieving a unified, comprehensive vision of the county's desired future. Through the County's General Plan, transportation objectives and strategies are linked with those of managed, balanced growth, environmental quality and social and economic well-being.

TRANSPORTATION AND AIR QUALITY

Automobile emissions make up 80 - 90 % of carbon monoxide pollution in the Bay Area. Other auto-related air pollutants include nitrous oxides, hydrocarbons, and particulates. Countywide, approximately half of these pollutants are produced by auto emissions.

Vehicle emission are affected by the trip length, travel time, the number of trips taken and whether or not travel occurs with a cold engine or a warmed-up engine. A cold start of a gasoline engine produces virtually as many hydrocarbon emissions as would traveling approximately 12 miles with the engine warmed up. A pattern of auto use characterized by many origins and destinations and long intervals between trips requiring several coldstarts daily is more polluting than longer trips that take place with a warm vehicle. Likewise, a trip made in congested traffic can produce more air pollutants than the same trip during less congested conditions. For instance, a ten mile trip at 60 mph could generate only 30% the hydrocarbons of the same trip at 20 mph. MTC estimates by the year 2005, 35% of air pollution will be caused by traffic operating on congested highways.

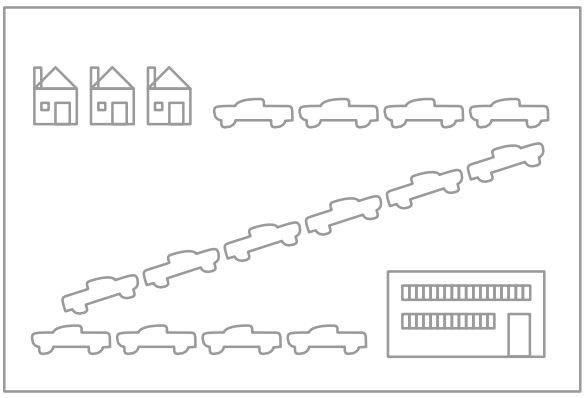
During the last 15 years, the combination of automobile technology and cleaner fuels has resulted in dramatic improvements in air quality in the Bay Area. This has occurred despite unprecedented growth in auto ownership and use. Despite measurable improvements, air

quality standards set by the Federal Clean Air Act for carbon monoxide have been exceeded an average of 5.5 days each year between 1984 and 1989. New automotive technologies mandated by federal and California motor vehicle emission standards combined with the gradual reduction in use of older, more polluting vehicles, will result in much lower emitting vehicles. However, continuing population and employment growth may offset the gains achieved through better technology. (See also Air Quality section in Health and Safety Chapter)

A significant part of the Bay Area's strategy for cleaning the air as outlined in the Clean Air Plan of 1991 relies on encouraging greater use of transit, ridesharing and other alternatives to the single-occupant vehicle.

TRANSPORTATION AND ENERGY CONSERVATION

California relies upon non-renewable fossil fuels for almost 90% of its energy needs, and nearly 50% of all energy consumed in the state is used for transportation. The 1992-93 California Energy Plan identifies three major transportation strategies for curbing energy demands and conserving non-renewable energy sources, including : (a) increasing vehicle fuel efficiency, (b) reducing vehicle-miles traveled, and (c) reducing congestion. To the extent that Santa Clara County is successful in implementing the related strategies and policies outlined in this chapter, it will contribute significantly to the goal of energy conservation. (See also Energy section of Resource Conservation Chapter).



Strategies, Policies and Implementation

Given that travel demand is increasing and projected to continue, that we are nearing the completion of our planned system of roadways, and that many portions of the existing system are near or over capacity during peak hour travel, it is critical that we employ a multi-faceted, comprehensive approach to ensuring future mobility that does not rely solely on building more roadways. Below are statements of general policy intent which provide the context for the detailed policies to follow regarding each of the four strategies.

➔ *Policies and Implementation*

C-TR 1
Santa Clara County should develop and maintain an adequate, balanced, and integrated transportation system that is affordable and convenient to use and that is capable of meeting projected future demand.

C-TR2
An adequate transportation system for Santa Clara County should be considered essential for improving overall quality of life, including:
a. continued economic development and increased living standards;
b. enhanced environmental quality; and
c. improved livability of urbanized areas.

C-TR 3
In order to safeguard future mobility and achieve other transportation-related goals and objectives stated in the Vision of the General Plan, the following set of coordinated strategies should guide decision-making and implementation efforts on a sub-regional basis:
a. develop urban land use patterns that support travel alternatives;
b. manage travel demand, system operation, and congestion levels;
c. expand system capacity and improve system integration; and
d. support new transportation technologies.

Strategy #1:
Develop Urban Land Use Patterns that Support Travel Alternatives

The land use patterns of a community dictate, to a large extent, how people travel from one place to another. Low-density, dispersed development, which predominates in Santa Clara County, is difficult and inefficient to serve with public transit, discourages walking and bicycling, and virtually requires local residents to rely on their automobiles for all travel purposes. On the other hand, densely developed, mixed-use areas are more likely to support travel alternatives; with activities closer together, people are inclined to walk or bike. When such dense, mixed-use areas are connected via transit, people are more likely to use transit.

Congestion and declining mobility are largely a result of the design of Silicon Valley's low density suburban office centers which force workers to be dependent on their private automobiles for getting to work and making noon-hour errands. In 1990, for example, only 3% of all commuters used transit and nearly 78% drove alone.

A strategy to increase the density and mix of land uses within the urbanized area of the county, especially along transit corridors and at major transit stations, could have a greater longterm impact on congestion than any mixture of transportation management or freeway and rail construction projects. Developing land use patterns in appropriate locations within existing urban areas that will support the use of transit, bicycling, and walking will reduce dependency upon the automobile.

The overall strategy of developing land use patterns that support travel alternatives involves several substrategies, including:

- coordinating land use and transportation planning
- increasing the proximity of jobs and housing
- increasing densities along transit corridors
- encouraging mixed use development, and
- designing development sites to support travel alternatives.

COORDINATING LAND USE AND TRANSPOTATION PLANNING

An effective transportation system requires that land use and transportation planning and implementation be supportive of one another and be directed toward achieving a shared vision of the county's future land use and development patterns. The vision of Santa Clara County's future put forth in this General Plan includes compact urban development patterns that are to be achieved by accommodating most of our future growth within existing areas, particularly in locations where it can be served efficiently by public transit. These compact development policies help support usage of the public transit facilities and other transportation improvements proposed in the Transportation 2010 Plan, while also accomplishing a number of other important public objectives such as minimizing public infrastructure and service costs, improving air quality, revitalizing declining urban areas, and preserving open space.

INCREASING THE PROXIMITY OF JOBS AND HOUSING

Locating housing and employment sites in proximity to one another will improve workers' ability to access their work sites without unduly long commutes and may reduce their reliance on their own private vehicle.

In 1990, only 2.1% of county residents commuted to work by walking. An additional 1.5% rode bicycles to work. One of the major obstacles to increased pedestrian and bicycle commuting is the geographic separation between residential neighborhoods and employment centers.

The availability of nearby housing is probably the most significant factor influencing the number of workers who walk to work. Suburban employment centers with the highest nearby residential densities and land use mixtures average the highest shares of work trips by walking.

Consequently, reducing the distance between jobs and housing is a major element of increasing travel alternatives. This can be

accomplished by converting undeveloped or underutilized lands near existing employment centers from commercial and industrial uses to residential or mixed-use designations. It can also be accomplished by increasing development densities in existing residential areas near job concentrations.

Linking job and residential location through employers has the potential to significantly reduce congestion and safeguard air quality. If employers provide housing for their employees in close proximity to their work sites, more workers will be able to access their jobs by walking or cycling and fewer will require a car for noon-hour errands.

It is not enough to merely balance the number of jobs and housing units in communities, however. First, the housing must be available to those working at adjacent work sites. This could require employers leasing on-site or near-site housing to their employees and/or guaranteeing that a specific number of units will be available to them at those sites. Second, there must be transportation facilities, such as walkways and bikeways and local arterials, to actually accommodate travel between housing units and work sites.

INCREASING DENSITIES ALONG TRANSIT CORRIDORS

One of the most significant ways we can support travel alternatives and reduce our dependency upon the automobile is by increasing residential and employment densities along major transit corridors. Through selective intensification of land uses along transit corridors, and especially near transit stations, Santa Clara County can

"Transit Oriented Development" (TOD)

The concept of pedestrian and transit oriented development holds promise for many suburban communities grappling with traffic congestion. This type of development combines higher density mixed uses with transit to allow residents to walk to their work site or walk to a rapid transit stop and travel a few stops to work.

An example of TOD includes the "Pedestrian Pockets" concept, which clusters housing, retail space and offices within a quarter-mile radius of a transit system. Large scale pockets of 50 to 100 acres may also include commercial uses, day care, recreation, and parks. Up to two thousand units of housing and one million square feet of office space can be located within three blocks of the transit station using medium urban residential densities and four-story office configurations. In a small Pedestrian Pocket, homes are within walking distance of a neighborhood shopping center, several three-acre parks, day care, various services, and two thousand jobs. Within four stops of the light rail in either direction (ten minutes), employment is available for 16,000 or the amount of backfire growth equivalent to that of one of the nation's highest-growth suburbs over the last five years (Kelbaugh, et. al., 1989)

Within Santa Clara County there are many opportunities for this type of development. It could occur on vacant parcels within urbanized areas, in urban redevelopment areas, on underutilized retail, office or industrial sites, or in undeveloped areas on the periphery of the developed portions of cities. Cities, such as San Jose, Mountain View, Cupertino and Sunnyvale are planning to or are in the process of re-developing their central areas to be more dense and compact and to incorporate a mix of uses. These new nodes of development provide excellent opportunities for cost-effective rapid transit services.

To facilitate and encourage application of TOD concepts, the former County Transportation Agency developed in conjunction with Peter Calthorpe and Associates a document entitled "Transit Oriented Development Design Concepts." This document contains design strategies and examples that encourage transit use, carpools, bicycle and pedestrian modes and which further the principles of compact urban development discussed in the Growth & Development Chapter of the County's General Plan.

Most recently, the Transit District has initiated a "Transit-Oriented Development Program" to create opportunities for TOD and to help integrate transit and land use planning from the initial rail planning stages through construction. Moreover, it is designed to focus future growth around existing and future rail stations in patterns which will ultimately maximize the rail system's potential. Four key elements make of the program–station area plans, joint development projects, city plans, and private development projects.

begin to evolve toward land use patterns that are more supportive of transit use, as well as of walking and bicycling.

Higher density, mixed-use development along transit routes enables the use of transit for short or medium-length trips since the train or bus stop is a short walk away. Except for commutes of 30 miles or more, people typically will not use transit if they have to drive their car to access it. To enhance the cost-effectiveness of public investment in transit facilities, we need to develop the kinds of higher density residential and mixed use land use patterns along transit corridors that will provide the ridership needed for public transit to prevent worsening congestion on our roads.

ENCOURAGING MIXED-USE DEVELOPMENT

Recent studies have shown that increasing the mix and the densities of land uses increases the likelihood that people will walk, bike, or use transit to get to their destinations. Mixed use development that incorporates residential and commercial uses enables people to perform on foot many of the errands they would otherwise do by car. Similarly, mixed use development at worksites allows workers to leave their cars at home since the services they need — banks, restaurants, cleaners, dependent care, etc. — are nearby and can be reached by walking.

Mid-day shuttles that serve large activity centers such as Stanford Research Park, Cupertino, downtown Mountain View, etc. and city centers would allow people to take transit to the site and access each destination within the site by shuttle.

Whereas land use plans and policies in recent decades have tended to segregate land uses, future plans and policies must encourage greater use of mixed-use development.

DESIGNING DEVELOPMENT TO SUPPORTTRAVEL ALTERNATIVES

The design of development sites also significantly influences travel behavior. For instance, the presence and location of bus stops and waiting areas, the orientation of buildings to one another, the placement of sidewalks and bikeways throughout the development site, as well as the placement of parking can all influence the use of alternative commute modes.

The potential effectiveness of higher-density and mixed-use development in facilitating the use of travel alternatives can be increased through sensitive urban design that incorporates features that make walking, bicycling, and public transit more accessible, safe, convenient, and attractive.

➔ ***Policies and Implementation***

C-TR 4
Overall transportation planning for Santa Clara County should be integral and consistent with the goals and objectives of comprehensive, countywide planning regarding urban growth management, compact and mixed use development patterns, environmental quality, and social and economic well-being. [new policy]

C-TR 5
The transportation plans and the land use plans, specific plans, and redevelopment plans of local jurisdictions should be consistent and mutually-reinforcing in order to enhance transportation infrastructure investment.

C-TR 6
Increase the proximity between housing and major employment areas to reduce commute distances and automobile-dependency by:

a. increasing supply and affordability of units in northern portions of the county, as well as increasing employment-related land uses in the southern portion of the metropolitan area;
b. applying the concepts of "balanced urban growth and development" in general to both the north and south valley areas;
c. encouraging developers and employers to build on-site or near-site housing for potential workers at a planned commercial or industrial site, the cost of which is matched to the workers' wages;
d. encouraging developers to provide pedestrian and bicycle paths that connect housing and employment sites so as to encourage walking and bicycling.

C-TR 7
Appropriate urban densities, mixed-use development patterns, and other aspects of urban development which support use of travel alternatives and reduce auto-dependency should be employed along planned transportation corridors, within designated "urban activity centers," and within redeveloping areas of existing cities.

C-TR 8
Urban design concepts and site development standards which facilitate use of transit and other travel alternatives should be adopted and implemented by local jurisdictions, to provide adequate:

a. accessibility to transit and transit facilities;
b. pedestrian and bicycle pathways and facilities, both on and between individual sites; and
c. building design, orientation, on-site services and amenities which support the use of travel alternatives.

Implementation Recommendations

C-TR(i) 1
Provide financial and other incentives for creating growth nodes for higher density development at transit centers. Encourage the development of housing at all income levels at each node. (Implementors: Cities)

C-TR(i) 2
Develop coordinated (city/county) land use/ transportation plans for activity centers to be served by a major transit facility which include transit connections between the centers and circulation within the centers. (Implementors: Cities /County/Transportation Agency)

C-TR(i) 3
Encourage city zoning policies that allow mixed use development, including child/senior care, and housing for a mix of incomes and household types, in commercial and residential areas and at transit centers. (Implementors: Cities)

C-TR(i) 4
Encourage cities to apply Transit-Oriented Development Guidelines to all new development within one-half mile of a transit stop along a major transit corridor. (Implementors: Transportation Agency, CMA, Cities)

C-TR(i)5
Develop Countywide Site Design Guidelines to be applied to all major renovations, and new development within commercial, industrial and high-density residential areas. (Implementors: Transportation Agency, CMA, Cities)

Strategy #2:
Manage Travel Demand, System Efficiency, and Congestion

MANAGING TRAVEL DEMAND

■ Transportation Demand Management (TDM) Measures

For many reasons, the strategy of building roadways to accommodate an ever-increasing volume of automobiles is no longer an option for meeting this county's future transportation needs. It has become increasingly more difficult to either build or expand highways through urbanized areas. Not only is it prohibitively expensive, but there are significant environmental impacts of doing so as well. Faced with increasing needs and limited budgets, traffic engineers and planners have become more creative in their approach to planning, building and managing transportation systems. As a result, Santa Clara County has begun to experiment with and employ various measures to expand the capacity of its transportation system that are relatively low in cost and that do not involve extensive amounts of construction.

In general, these measures are designed to reduce the demand for transportation services and enhance the efficiency of the existing transportation system rather than increase the supply. Collectively, they are referred to as Transportation Demand Management (TDM). TDM is the most cost-effective approach to increasing transportation system capacity (i.e., the number of people who could move through the system

TDM Measures

- **Ridesharing - Ridematching**
  Ridesharing refers to both formal and informal arrangements whereby two or more people share a ride (carpool) in a privately-owned vehicle, usually from and to the same geographic areas. Ridematching is a service provided by a publicly funded agency to assist carpoolers in finding potential ridersharers who are travelling along the same routes or to the same destination.
- **Vanpooling**
  Vanpooling is similar to ridesharing in that people travelling in the same direction share rides, except that vanpools usually require more formal arrangements, carry 7 to 15 people, usually travel greater distances (over 20 miles one way) and may or may not involve a private vehicle, as in the case of an employer provided vanpool.
- **Transit passes - transit subsidies**
  Some employers subsidize their employees' ride to work if they use transit — (bus, train or light rail.) Others make it more convenient for their workers to use transit by selling transit passes at the work site.
- **Guaranteed Ride Home**
  Carpoolers, vanpoolers or transit riders, are assured of a ride home or to the day care provider via taxi, rental car or company car in cases of an emergency or when a worker cannot travel home via his/her carpool, vanpool, or other.
- **Flextime - Alternative Work Hours**
  Allowing employees to work alternative hours, which would result in their travelling either before peak commute hours or after peak commute hours can have a significant impact on the level of congestion during the peak commute hours. Compressed work weeks result in less trips per week.
- **Reduced Parking**
  Research has shown that the most effective means of reducing the number of single-occupant vehicles is to either limit the amount of parking available at worksites or institute a fee for parking.
- **On-Site Showers and Bike Lockers for Bicyclists**
  People may be more likely to ride their bikes to work if they are able safely store their bikes and/or to shower before starting work. This would require some facility improvements, in most cases.
- **Market Strategies**
  Commute alternatives can also be encouraged through pricing strategies such as: parking fees, increased tolls, and an increase in the gas tax. These measures essentially increase the consumers' direct cost of travelling. As these costs increase, travel via a single-occupant vehicle is reduced

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at any one time). For that reason alone it is an intrinsic part of this region's transportation strategy.

TDM also has beneficial effects on the region's air quality. In fact, transportation control measures make up a considerable portion of the Bay Area's plan for meeting the requirements of the California Clean Air Act. Agencies responsible for developing and implementing TDM are continually adding to the list of possible measures that any city or county could employ. Some of these measures are described in the previous sidebar.

■ Employer-Based TDM and Management Associations (TMAs)

The goal of most TDM programs is to increase the mobility of residents and workers in an area, reduce air pollution, and reduce the number of single occupant vehicle trips, especially during peak commute hours. Programs are therefore directed primarily towards commuters. The most effective means of eliciting the participation of commuters in TDM programs is through their employer, especially when the employer has control over parking. Therefore the full support of employers is key to the success of TDM; the more involved they are, the more successful the program.

For many employers, transportation management associations (TMAs) allow them to participate in a TDM program without the cost of a full-time staff to coordinate it. A TMA is organized by a group of employers and property owners/managers within a specific geographic area for the purpose of administering TDM programs for that area by providing travel options to people who work there. These options would include ridesharing, vanpooling, flextime, telecommuting and transit incentives. Though there are many successful TMAs throughout the United States, there are no TMAs in Santa Clara County, to date.

■ Effectiveness of TDM

The effectiveness of TDM may be enhanced by a number of factors. The availability of convenient and effective transit options and high occupancy vehicle systems provides workers with alternatives to using their own vehicle. Likewise, showers and bike lockers placed in office buildings facilitates bike riding. Reducing the supply of parking and/or increasing the cost of employer-provided parking has been shown to be the most effective strategy for increasing the proportion of workers who rideshare or use transit. Providing allowances for low-income households assures that such measures are equitable. Locating services such as banks, restaurants, cleaners and dependent care facilities within walking distance of work sites also gives workers the opportunity to conduct household business without the need for a vehicle. Finally, simple architectural features such as covered pedestrian ways and transit stops protects commuters from inclement weather.

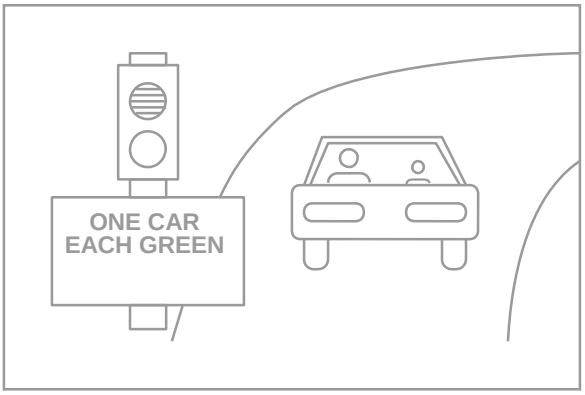
■ Youth Transportation

Youths and students have special transportation needs. Partly due to funding restrictions, school districts have reduced transportation services for their students. As a result, more parents are driving their children to school. It is estimated that fewer than 14% of all school children are transported to school by district-run buses. In addition to the need for children to be transported between home and school, children require some form of transportation between school and after-school activities. At least forty-five to fifty percent of school children require some form of after-school supervision because their parents work full-time. Most after-school care and/or activities, however, are not located at or near the school site, necessitating some form of transportation.

Increasing children's use of transportation services that are safe and affordable — whether provided by schools or by transit districts — would have several desired outcomes. First, it would enable more parents to either carpool, walk, bike or stay at home. Second, it would increase the children's familiarity with transit. Third, it would reduce congestion and improve air quality, since it is estimated that school trips make up 2 to 3% of all vehicle miles travelled in the Bay Area. Most importantly, it would enable more children to have adult supervision and be engaged in worthwhile after-school activities.

■ Enactment of Traffic Reduction Ordinances

In response to recent state legislation such as the California Clean Air Act and Assembly Bill 471, enabling the formation of Congestion Management Agencies, Santa Clara County and each of its 15 cities have enacted traffic reduction ordinances, which mandate the implementation of TDM for all employers with 100 or more employees. The ordinances state goals to be achieved in terms of average vehicle ridership, which companies must participate and what standards must be complied with. Average Vehicle Ridership (AVR) is simply the ratio of commuters to the number of vehicles used for commuting. Employers must achieve average vehicle ridership targets that are set for their geographic area.



TRANPORTATION SYSTEM MANAGEMENT (TSM)

In addition to TDM there are means of increasing the efficiency of the existing transportation system through operational improvements, which are low in cost and aim to increase the flow of traffic. These measures are collectively referred to as Transportation System Management and include such strategies as ramp metering, signal synchronization, high occupancy vehicle lanes and park and ride lots. These measures cost more than TDM and most involve some amount of construction. HOV lanes actually not only expand the system in that they add additional lanes to existing highways, but also increase the effectiveness of rideshare and vanpooling programs.

MANAGING CONGESTION

According to state law, all urbanized counties in California must prepare and monitor the implementation of a Congestion Management Program (CMP) and update that program every two years. CMPs must contain five elements:

1. a definition of the CMP system which identifies which transportation corridors and intersections are part of the CMP system as well as what the minimum acceptable Level-of-Service (LOS) should be on that system;
2. a transit service and standards element;
3. a transportation demand management and trip reduction element;
4. a land use impact analysis element; and
5. a capital improvement element. The Santa Clara County Congestion Management Agency was formed in 1990 to implement this state requirement.

An additional section of the CMP outlines requirements for deficiency plans. The cities and the County are required to write and implement a deficiency plan whenever transportation facilities within their jurisdictions which are part of the CMP roadway system do not operate or are expected to not operate within the adopted Level-of-Service (LOS) standards. (Currently, the minimum acceptable level of service on the CMP roadway system is LOS E.) The deficiency plans must describe measures to be employed in maintaining or improving the flow of traffic at deficient or near deficient segments of the transportation system as defined by the CMP. These measures include TDM, site-design, and transit-related improvements and are listed in the CMP Technical Guidelines. Implementation of a CMA-approved Deficiency Plan, when required, is mandatory for the city or county to receive their gas tax subventions from the State.

LEVELS OF SERVICE

Level of service is a qualitative measure that describes operational conditions within a traffic stream. A level-of-service definition generally describes these conditions in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. Six levels of service are defined for different types of facilities (i.e. freeway, rural highway, urban and suburban arterial, signalized intersection). They are given letter designations, from A to F, with levelof-service A representing the best operating conditions and level-of-service F the worst.

It is desirable to maintain a level of service that will allow as little disruption in movement along a transportation corridor as is practical. Therefore, this plan establishes level-of-service D as a goal to be achieved whenever practical. There are situations, however, in which achieving LOS D may not be feasible or desirable. For instance, many facilities are already operating at LOS E or F. Achieving a LOS D in these instances would require a major investment in either roadway, transit or other types of improvements.

It may be desirable to allow a lower level of service in order to encourage higher density development and the use of transit in specific urbanized areas of the county. This presents a dilemma, however.

On the one hand, it is important that traffic moves at reasonable speeds along county roadways and that measures be adopted to ensure mobility. New projects that will severely impact the transportation system should be required to mitigate the impacts using TDM and other transportation control measures. On the other hand, though dense development will add

more congestion, transit is more effective in densely developed areas. If the urbanized areas of this county are to densify in order to make transit more effective, then congestion along certain segments of the transportation system must be tolerated until transit is more readily available. In addition, the cities and the County should facilitate the writing and implementation of deficiency plans in order that development continue to occur within the urbanized centers rather than at the outskirts of the county.

Level Of Service (LOS) Definitions

LOS A Free flow. Low volumes and no delays, Volume less than 60% of capacity; delay at signals 0-5 seconds.

LOS B Stable flow. Speeds restricted by travel conditions, minor delays. Presence of other users in the traffic stream. Volume 60-70% of capacity; delay at signals 5-15 seconds.

LOS C Stable flow. Speeds and maneuverability closely controlled due to higher volumes. Volume 70-80% of capacity, delay at signals 15-25 seconds.

LOS D Stable flow. Speeds considerably affected by change in operating conditions, minor delays. High density traffic restricts maneu verability. Volume 80- 90% of capacity, delay at signals 25-40 seconds.

LOS E Unstable flow. Low speeds, considerable delay, volume at or near capacity. Freedom to maneuver is extremely difficult. Volume 90-100% of capacity; delay at signals 40-60 seconds.

LOS F Forced flow. Very low speeds, volumes exceed capacity, long delays and queues with stop-and-go traffic. Volume exceeds capacity; delay at signals more than 60 seconds.

➔ *Policies and Implementation*

C-TR 9
Transportation Demand Management (TDM) measures should be employed to make more efficient use of existing road and highway capacity by increasing vehicle occupancy and reducing the need for commute and other trips. Such measures primarily include, but are not limited to the following:

a. employer-based and school-based ridesharing programs;
b. vanpooling;
c. expanded use of flex-time and telecommuting; and
d. transit subsidies, reduced parking, and other "market" approaches.

C-TR 10
Transportation System Management (TSM) measures should be employed to ensure maximum operating efficiency of the existing system of roads and highways, including but not limited to the following:

a. signal synchronization, signal pre-emptions for transit vehicles;
b. ramp metering; and
c. traffic surveillance and traffic advisory signs.

C-TR 11
Santa Clara County shall participate in updating and implementing the Congestion Management Plan, the provisions of which as set forth by law:

a. establish priority for air quality goals and objectives and development of alternatives to automobile travel; and
b. allow additional road capacity to be created only when all feasible automobile travel demand measures have been implemented.

C-TR 12
It is the goal of this plan to achieve a level-of-service (LOS) no lower than D at peak travel periods on city streets, county roads, expressways and state highways. However, in certain instances, a lower level of service may be acceptable when LOS D can not practically be achieved.

C-TR 13
Support and encourage the writing and implementation of deficiency plans for segments of the Congestion Management Plan designated transportation system that do not operate within the CMP LOS standard or are expected to not operate within the CMP LOS standard. Deficiency plans should focus on and give strong support to the use of existing and planned transit facilities.

C-TR 14
Reduce the number of workers who must drive by increasing the opportunities to telecommute; support and encourage the development and implementation of employer-based telecommuting programs.

Implementation Recommendations

C-TR(i) 6
Development proposals which would cause existing levels-of-service for roadway segments and intersections in the vicinity of the proposed project to fall below level-of-service D at peak travel periods; or would create congestion at peak periods worse than level-of-service D on nearby roadway segments and intersections may be approved if either of the following mitigations are included in the project.

1. The developer implements 'reasonable' mitigation measures to offset increases in traffic congestion created by the project. Such mitigation measures could include contributing to transit improvements, contributing to TSM improvements, establishing employer-based TDM measures or other measures acknowledged by the Congestion Management Agency to offset the level-of-service impacts of the proposed project.
2. The project is located at or near an existing or planned transit node, higher density is desired by the approving agency, and programs will be implemented to encourage commuters to use commute alternatives, including transit.

C-TR(i)7
A CMA-approved deficiency plan must be written and implemented for all development proposals for which the level-of-service at peak travel periods on the CMP system roadways and intersections falls below LOS E.

C-TR(i) 8
Provide incentives to increase employer participation in transportation demand management (TDM) programs.

C-TR(i) 9
Promote and facilitate the development of high occupancy vehicle systems including carpooling and vanpooling.

C-TR(i) 10
Continue to implement incentives to encourage carpooling and vanpooling such as:

a. Preferential carpool parking;
b. High occupancy vehicle (HOV) lanes in congested areas;
c. Special access lanes on metered freeway on-ramps; and
d. Encourage employers to replace free employee parking with a "Transportation Allowance."

C-TR(i) 11
Continue to implement incentives to encourage alternatives to the automobile, particularly in congested areas. Provide means to equalize the relative burden of complying with these measures across households in different income categories through:

a. auto-free zones;
b. imposition of/or increasing parking fees;
c. parking fees in employee parking lots;
d. reduction of the number of parking spaces; and
e. placement of a greater proportion of roads (and related facilities) cost directly on the users of roads.

C-TR(i) 12
Continue to implement techniques which increase highway and expressway efficiency, including:
a. designation of high occupancy vehicle lanes;
b. construction of special freeway on-ramps for buses, carpools, and vanpools;
c. traffic signal preemption systems for transit vehicles on freeway on-ramps;
d. a coordinated program of signalization, channelization, ramp metering; and
e. traffic signal preemption systems for rail transit vehicles on city streets.

C-TR(i) 13
Establish alternative work hours and allow flex time. (Implementors: Employers)

C-TR(i) 14
Each city and the County should implement their TDM ordinance. (Implementors: Cities/ County)

C-TR(i) 15
Promote joint efforts between local jurisdictions and the private sector in developing and implementing TDM strategies and encourage the development of Transportation Management Associations within Santa Clara County. (Implementors: Cities/County)

C-TR(i) 16
Continue to develop convenient and effective transit alternatives, HOV, bicycle, and pedestrian facilities to provide the infrastructure TDM programs require to succeed.

C-TR(i) 17
Develop trip reduction demonstration programs for non-commute trips to educational institutions, retail, libraries, etc. Expand programs for reducing the number of non-work trips by single-occupant automobile. (Implementors: Service industries, Cities, County,)

C-TR(i) 18
Pursue legislation requiring a shift toward the use of alternative, cleaner, fuels. (Implementors: Cities/County/State)

C-TR(i) 19
Achieve a 35% commute alternative mode split goal or 1.33 average vehicle ridership during peak travel periods in Santa Clara County.

C-TR(i) 20
Satisfy the requirements of the California Clear Air Act legislation related to trip reduction and TDM.

Strategy #3:
Expand System Capacity and Improve System Integration

The third major strategy involves increasing the physical capacity of the overall transportation system primarily through investment in transit facilities and paratransit services. It furthermore stresses the need for improved integration, or linkages, between various transit modes, such as passenger rail, light rail and bus service, and facilitating increased use of other alternative modes such as paratransit, bike and pedestrian travel. Recommended roadway system capacity improvements are primarily for completing the commuter lane network, alleviating particularly heavy bottlenecks, and for planned interchange improvements.

Increasing capacity of the roadways and developing the nucleus of a comprehensive rail transit system are important elements of this plan and are achievable goals. Not only are improvements necessary to accommodate anticipated travel needs within the short term, but an integrated system of rail is a necessary pre-requisite for densifying our urban areas to support use of alternative travel modes. These recommended improvements are consistent with this plan's strategies to increase the use of commute alternatives. At least 35% of all commute trips should be made by some mode of transportation other than the single occupant auto, such as walking, bicycling, ridesharing, transit or working at home.

INCREASING ROADWAY SYSTEM CAPACITY

It is expected that the number of trips taken in Santa Clara County will increase by 11% between 1995 and 2010. By 2010, there will be a

total of over 5 million trips per day. The amount of congestion on freeways, expressways and major arterials resulting from an 11% growth in the number of trips will vary by roadway. There may be a reduction of congestion on some routes due to the completion of planned roadway and transit improvements. Some traffic will be re-distributed as a result of the completion of improvements on Routes 85 and 237 . Other routes will continue to experience congestion, especially after 2010, when continuing population and employment growth cause roadways to operate beyond their planned capacity.

Several roadway and transit projects recommended in the 1980 General Plan have been completed or are near completion. These include:

- the Guadalupe Corridor LRT;
- the expansion of the bus system and increase in service level until 1992, when bus service was reduced by 10%;
- construction of most of the the baseline system of commuter lanes on freeways and expressways;
- Highway 85 (West Valley Freeway); and,
- ramp metering and other operational improvements.

The T-2010 Countywide Transportation Plan calls for additional improvements in order to meet travel needs over the next two decades. This section is based substantially on the recommendations outlined in T-2010.

HIGHWAYS AND EXPRESSWAYS

The county's network of roads consists of nine highways (101, 880, 280, 680, 17, 85, 87, 152 and 237), and 8 expressways (Almaden, Capitol, Central, Foothill, Lawrence, Montague, Oregon, and San Tomas). During the 1980s large portions of this network became severely congested prompting several complementary efforts to increase capacity of the roadway system. These efforts included the County's T-2000 Plan, the Golden Triangle Task Force, and Measure A. As a result, much has been accomplished in adding new capacity. However, congestion is still significant on freeways and expressways and if employment and population continue to increase as projected, congestion will get worse unless more capacity is added.

The 1980s saw continued increases in the level of congestion on county roads. In 1989, over 62 freeway miles in the County were congested each commute period resulting in over 15,000 hours lost daily, compared to 7,000 in 1980. The most significant increases in traffic volume occurred along Routes 880 and 680 at the Alameda County border. Between 1983 and 1989, peakhour volume increased by 2,700 vehicles on Route 880 and 5,500 vehicles on Route 680.

In recognition of the limitations to adding more freeway and expressway capacity, T-2010, the first T-2000 plan update, called for a more balanced transportation system that emphasized transit, transportation demand management and land use strategies in addition to increasing highway and expressway capacity. The T-2010 recommendations for increasing highway and expressway capacity focus primarily on:

- continuing to add high occupancy vehicle lanes;
- improving selected interchanges and intersections;
- selectively adding new highway and expressway lanes where necessary to relieve severe bottlenecks;
- implementing transportation system management measures; and
- implementing sophisticated transportation operations systems.

Highway and expressway improvements recommended by T-2010 emphasize the completion of already committed projects that will have the greatest impact in alleviating peak hour congestion. The focus is primarily on expanding the commuter lane network and building facilities to support the use of this network. The corridors with commuter lanes saw dramatic increases in ridesharing: from 32% on Hwy 101 to 102% on San Tomas Expressway.

INCREASING TRANSIT SYSTEM CAPACITY

■ The Bus System

Bus service started in Santa Clara county in 1973. At that time, the entire transit system consisted of a total of 78 buses which carried seven million passenger trips annually. By 1994, the Transit District was operating 57 regular bus routes and 13 express routes, with a fleet of 460 vehicles (375 peak deployment). Weekday bus ridership is approximately 128,000. Combined with weekday light rail ridership of 19,000, total annual bus/rail transit ridership is 44.5 million.

Mass transit ridership is expected to continue to increase. The following factors will play a role in the demand for transit:

- increased density of land development;
- an increase in the population;
- a possible increase in fuel prices;
- new transportation demand management programs and expansion of existing ones;
- completion of the light rail system; and
- new commute bus service using the expanded High Occupancy Vehicle (HOV) lane system.

■ Recommendations for Bus System Improvements

The T-2010 plan recommends that the bus system be expanded over the next 20 years as funding becomes available. This expansion would involve adding more buses primarily to reduce the time between buses (headways), adding more express routes to serve commuters, and adding new rail shuttles to major, high density activity centers.

■ Paratransit

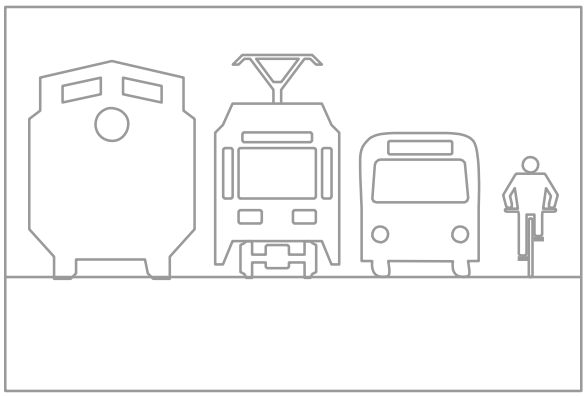
Paratransit services are typically door-to-door services for persons who are unable to independently use conventional fixed-route transit because of a disability. The Metropolitan Transportation Commission (MTC) estimates that there were over 52,000 transit-disabled people living in Santa Clara County in 1990, 3.5% of the population. According to the T-2010 Plan, this number is expected to increase to 88,000 by that time, or 5% of total population.

The Americans with Disabilities Act (ADA) of 1990 requires that the Transit District develop a paratransit system that serves persons with disabilities who are unable to independently use regular fixed route service. The ADA also requires that operators of fixed-route transit services adhere to accessibility guidelines and other ADA requirements.

Currently, all LRT vehicles and stations and most bus services are accessible to persons with disabilities. The Transit District has implemented a county-wide paratransit brokerage service and contracts with two paratransit service providers in the County, who together provide approximately 340,000 trips per year.

There are two major categories of paratransit services, publicly-provided services and agencyprovided services. Public services are operated or sponsored by cities, counties or transit districts, are open to the general transit disabled public, serve a wide variety of destinations and trip purposes, and are paid for predominantly with transportation funds. Public services typically carry general trips and also some percentage of social service program trips, averaging about 30% in Santa Clara County.

Agency-provided services are those that are specifically operated by social services to carry their clients to and from programs. They are funded mostly from categorical program funds, with some contributions from counties, cities, and private philanthropy. Some community based agencies also provide some general trips. Over 30 agency services provide about 640,000 trips per year.



The Existing Rail System

The current intra-county rail system consists of 20 miles of Light Rail Transit (LRT) which extends from near Great America in Santa Clara at its northernmost end south to the station at Santa Teresa in south San Jose. There are currently 33 stations, with one, the Tamien Station, which serves as a multi-modal station linking CalTrain, the LRT, and the bus system. By mid- 1994, the LRT carried 6.2 million passengers.

In addition, CalTrain provides passenger rail service between San Francisco and Gilroy. Limited service to Gilroy began in 1992. Trips taken by CalTrain are estimated to increase from about 21,000 per day in 1994 to 39,000 per day in 2010. Currently, 60 trains operate between downtown San Jose and San Francisco. Three-fourths of these trains extend south to the Tamien multimodal station, and eight trains operate between San Jose and Gilroy. In all 20,000 passengers board daily, of which one-third board in Santa Clara County.

The Long Range Rail Master Plan

The T-2010 plan includes a long range rail master plan. The conceptual master plan calls for the integration of intra-county, regional, inter-regional and activity center rail systems.

The intra-county system would serve local trips and feed the regional system. Its primary purpose would be to provide a spoke and loop rail system within the county. The loop rail corridors would ring the metropolitan area and would be supplemented with east-west lines and north-south spoke lines that would traverse downtown San Jose.

The intra-county corridors recommended by the T-2010 plan include the Tasman Corridor, the Vasona Corridor and the Capitol/Downtown-Evergreen Corridor and 11 additional intracounty corridors.

The regional system would connect Santa Clara County with adjacent counties and would be integrated with the intra-county system at points along the loop and in downtown San Jose. It would serve longer trips at higher speeds. The most notable regional rail service currently operating within Santa Clara County is the CalTrain, which operates between Gilroy and San Francisco and which is operated by the new Peninsula Commute Joint Powers Board.

Among the regional rail corridors recommended by T-2010 are Fremont/San Jose and U.S. 101 (currently CalTrain). The Fremont/San Jose corridor would connect San Jose to the BART system in Fremont. The U.S. 101 corridor will be upgraded to 66 trains daily, 8 of which serve the Gilroy extension. Remaining upgrades include electrification, the San Jose multi-modal station, centralized traffic control, new rolling stock and further South County improvements. The specific rail technology to be used in these corridors has not yet been decided and will require further study. New rail service should apply new and better technologies as they develop in order to provide the highest level of service possible with available funding.

An inter-regional rail system would provide high speed rail service that is linked with the intra-county and regional systems and the San Jose International Airport. This service will provide an alternative to air travel as well as travel by private vehicle. The inter-regional system will have few stops with a primary one in downtown San Jose. The State of California is primarily responsible for the design and development of the regional rail system. Two

T-2010 Rail Transit Priorities

Year 2000 Goals:
Rail Modernization:
101/South County (CalTrain)
New Rail Starts:
- Tasman
- Fremont-San Jose
- Vasona
- Capitol/Downtown - Evergreen

Year 2010 Goals:
New Rail Starts:
- De Anza
- South San Jose
- Stevens Creek/Alum Rock
- Tasman Completion–Sunnyvale/Cupertino leg

inter-regional rail corridors connect in San Jose: the Los Angeles - San Francisco line and the San Jose - Sacramento - Auburn line. The specific technology for the selected corridors has not yet been decided. There are numerous examples of high-speed rail in operation in Europe and Japan to study and evaluate for appropriateness in Santa Clara County.

The activity center system would serve areas of the county characterized by concentrations of high intensity land uses. Such areas may include downtown San Jose, San Jose International Airport, the Stanford Research Park and Cupertino. The purpose of the activity center system would be to support the remainder of the rail system.

In addition to activity center systems, a feeder system to allow more people to access the rail transit system is necessary. The main mode for feeder systems are buses and shuttles. However, in the future, feeder systems could consist of small electric cars that could hold up to four adults. The cars would be publicly or commercially owned but operated by commuters and readily accessible at curbside self-service stands located at reasonably close intervals. The feeder system would enable commuters to drive directly from their neighborhood to the closest transit station and from the end of their transit trip to their work site.

Before such an integrated system of rail could become a reality, it is necessary to develop a vision of the community that would be served by such a system. Failure to develop the built environment to complement the master rail/ transit system planned for Santa Clara County could result in a vastly underutilized, highly subsidized system.

The expansion of the existing rail system and establishment of new rail corridors would require billions of dollars over several decades. Completion of the T-2010 plan 10-year and 20-year recommendations alone would require $2.5 to $4.2 billion. Funding could come from a combination of sources. The 1992 Measure A, which continues the half-cent sales tax for transportation improvements would implement much of the T-2010 recommendations.

EXPANDING THE BIKEWAYS SYSTEM

The mild, Mediterranean climate and the relatively flat topography of the Santa Clara Valley provides an ideal setting for supporting and encouraging more cycling as a means of commuting to work. Without public subsidy, cyclists constitute 1.5% of commuters in Santa Clara County, only slightly less than the number carried by transit.

Studies show that bicycle commuters have a younger average age than other commuters; in two studies about 80% were under the age of 36. Estimates of the proportion of cyclists who were male ranged from 67% to 87%. Two studies indicated that professional and technical workers were the most likely to bicycle. In all estimates of mean travel distance, most bicyclists lived within five miles of work.

In 1992, the MTC revised its eligibility requirements for Transportation Development Act, Article 3 Bicycle/Pedestrian funds to require all cities and counties to establish Bicycle Advisory Committees (BACs) and adopt comprehensive bicycle plans. The County BAC was established in 1993 and on March 1, 1994, the Santa Clara County Board of Supervisors adopted the first Santa Clara County Bicycle Plan. This Plan contains numerous policies and recommendations necessary for a comprehensive bicycle transportation system. The Plan is updated every 2 to 3 years.

One of the Plan's recommendations was to develop a "subregional" bicycle system. The 1994 T-2010 Update implements this recommendation through a proposed preliminary subregional bicycle network which will require further refinement independent of the T-2010 planning process. This subregional network includes 10 cross-county commuter routes which will provide acces along major multimodal corridors. Intended for intermediate and skilled cyclists, these routes utilize mostly existing facilities (routes, lands, trails) and provide continuity across jurisdictional boundaries and links to major transit facilities. Opportunities for improved routes are also identified, dependent upon the construction of new bicycle facilities.

According to T-2010, the chief deterrent to bicycle commuting is the belief that bicycles do not mix well in traffic. Other factors include the distances, weather, the lack of showers and parking. Where showers and parking are provided, bicycle commuting increases. At Xerox's Palo Alto Research Center, 18% of employees bicycle; at Hewlett-Packard, 9%; at Syntex, 5 %. In addition, where many people already bicycle, others are willing to join them.

INCREASING SYSTEM INTEGRATION

transportation system so that travelers could easily transfer from one mode of travel to another or from one transit system to another is an important aspect of increasing the use of alternative travel modes. Currently, it is difficult to access Santa Clara County by transit from most other counties in the Bay Area Region. Likewise, county residents must use their car to reach San Francisco and major East Bay and North Bay cities, such as Berkeley or Oakland or face a commute trip via transit, that consists of many transfers and wait periods between transfers. Such a trip could take a few hours versus less than one hour by car. To make it easier for people to access jobs and services throughout the region, the various transportation systems must be fully integrated. In other words, BART, CalTrain and future transit systems' time schedules must be coordinated with County bus and lightrail schedules so that the wait times at transfer points are minimized.

INCREASING AIRPORT SYSTEM CAPACITY

The countywide roadway and rail system is the major focus of this Transportation Chapter. However, the county's system of air carrier, federal and general aviation airports are intrinsic elements of our transportation infrastructure; these facilities support intra-regional, interregional and international travel. Air carrier and air cargo services are vital elements of the economic infrastructure that support Santa Clara County businesses. Because of the importance of air travel to the economic and soical well-being of this county, policies related to aviation as well as the linkage between ground and air transportation are included in the General Plan.

■ The Existing Airport System

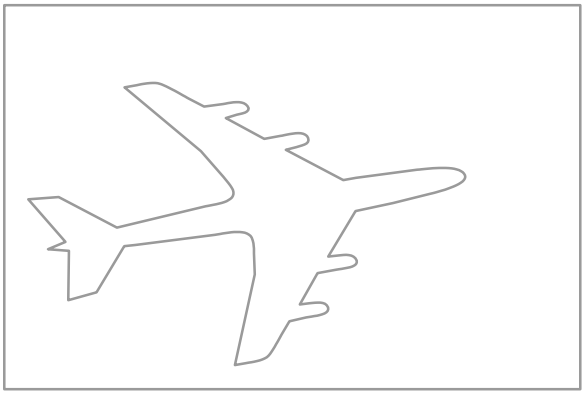
There are currently five airports in Santa Clara County. Only one, San Jose International Airport (SJC) provides air carrier and air cargo services. The remaining three civilian airports, Palo Alto, Reid-Hillview and South County, are general aviation airports and are operated by Santa Clara County. The fifth airport, Moffet Naval Air Station, is not available for non-federal air traffic now, nor is it expected to be within five to ten years. The National Aeronautics and Space Administration (NASA) will assume control of the facility in 1994.

■ Airport Planning in Santa Clara County

Policies governing airports in Santa Clara County are developed through several agencies. These include the Santa Clara County Board of Supervisors and the San Jose City Council, as well as the Bay Area Regional Airport Planning Committee, the City of San Jose Airport Commission and the County of Santa Clara Airport Commission. Moffet Field will be managed by the National Aeronautics and Space Administration (NASA). The Federal Aviation Administration (FAA) also has authority relative to the use of airports. Policies regarding land uses surrounding the airports are developed through the County's Airport Land Use Commission.

■ Increasing Demand for Air Passenger and Air Cargo Service

The Regional Airport System Plan, prepared by the Metropolitan Transportation Commission together with the Association of Bay Area Governments, has identified desired airport



traffic shares and demand for each airport in the Bay Area. According to this plan, San Jose International currently serves 6.8 million passengers per year and captures nearly 16% of the region's share of air traffic. By the year 2010, the number of air passengers served by SJC is expected to increase to between 12.5 and 16.1 million. This increase in demand for air carrier services will have corresponding impacts. In the future, there may be a need to increase the number of gates and possibly construct a new terminal at SJC. In addition, auto parking capacity may need to be increased. Ground access improvements will need to be made to enable easier access to parking lots and easier access by transit (Light Rail Transit and CalTrain).

■ Improvements to Air Carrier and General Aviation Airports

If it chooses to accommodate increased air carrier or air cargo traffic, SJC will need to divert a significant portion of general aviation air traffic to the County-operated reliever airports – – Reid-Hillview, Palo Alto and South County. Otherwise, SJC's capacity during Instrument Flight Rules (IFR) inclement weather will be restricted and extreme delays will likely occur.

The County of Santa Clara has made public its intent to close Reid-Hillview Airport in response to problems that encroaching urban development has presented. The County is currently in the process of assessing the costs and the relative merits of both continuing to operate and to closing this airport. Part of that assessment includes a demand forecast and a safety impact analysis. The FAA has not granted permission to close this airport. The Regional Airport Planning Commission recommends that this airport remain operational in order to provide general aviation relief for San Jose International.

The Naval Air Station at Moffett Field has been excessed by the Department of Defense and will be managed by the National Aeronautics and Space Administration (NASA) starting in 1994. NASA will make the air field available to federal agencies and several high technology companies performing work for these agencies or for NASA. The use of Moffett Field will likely be limited to these users for the forseeable future. Moffett Naval Air Station lies within the jurisdictions of Mountain View and Sunnyvale. Both of these cities support the continued use of Moffett Air Field by federal agencies and their contractors and do not support the use of Moffett Air Field as a general aviation reliever airport for SJC.

■ The Need For A Countywide Airport Master Plan

Thanks to improved telecommunications and air travel, the world is increasingly becoming more inter-connected. Inter-regional and international travel is vital to maintaining our relationships, both business and social, with the world around us. Therefore, it is important that the continued operation of all of Santa Clara County's airports be supported and enhanced.

A necessary component of this on-going support is developing a countywide airport master plan. Currently, a master plan is developed for each airport independently of the others. The age of these master plans varies from current to significantly outdated. A countywide airport master plan would consider all airports within the county as a unified, inter-related system that provides inter-regional and international travel. The Plan would address the following issues among others: the likely future demand for air carrier, air cargo and general aviation services; a selection of an alternative site for a general aviation airport, should increased capacity be needed in the future; and a recommendation of how best to manage all the airports. This master plan should also address the necessary physical development of all the airports to respond to identified demand for services and the safety issues associated with continued operation of all airports.

➔ Policies and Implementation

C-TR 15
Increase the overall physical capacity of the transportation system to meet projected demand, primarily through the following means:

a. increased transit system capacity and service levels for light rail, passenger rail, and bus transit;
b. increased paratransit, bike and pedestrian facilities and service; and
c. roadway capacity improvements to improve interchanges and complete the commuter lane network.

C-TR 16
Provide a balanced and integrated transportation system, which will allow for alternative means of travel and opportunities for transfer between alternative means.

C-TR 17
Development of the local transportation system should be coordinated with the regional and inter-regional transportation systems to ensure that they are fully integrated with each other.

C-TR 18
The entire transportation system should be fully accessible to and be planned and designed to be responsive to the special needs of seniors, school children, low-income, the physically challenged and transit disabled in accordance with the Americans with Disabilities Act of 1990.

C-TR 19
Highest priority for funding transportation improvements should be given to those projects which:

a. serve circulation needs within Santa Clara County; and
b. serve the greatest number of riders and which facilitate system integration.

C-TR 20
An integrated system of local, regional and inter-regional rail service should be developed.

C-TR 21
Local transit systems should be integrated with the local and regional transit systems of adjacent counties.

C-TR 22
The use of existing railroad rights-of-way for transit and alternative transportation (i.e., bicyclists and pedestrians) should be encouraged.

C-TR 23
Future rail transit improvements should receive highest priority for funding purposes if it can be demonstrated that they will serve areas where there exists or is planned to be transit-oriented, high density, mixed-use development.

C-TR 24
Support the use of the rail transit system by establishing a feeder system that would enable travelers to access rail stations without the use of their private vehicle.

C-TR 25
Priority should be given to sustaining a base level of service on major grid bus lines.

C-TR 26
The County's bus system should be expanded as funding allows. Expansion of the bus system shall emphasize improving service on existing routes. It should also emphasize express bus service to major employment centers, shuttle service to major activity centers, feeder buses to BART, CalTrain and light rail stations, and bus service to schools within urban service areas.

C-TR 27
Use and efficiency of the bus system should be maximized.

C-TR 28
Provide and maintain paratransit and fixedroute transit services that fulfill the objectives of the Transit District Paratransit Plan and meet the requirements of the Americans with Disabilities Act of 1990.

C-TR 29
Improve transit accessibility to schools.

C-TR 30
The County Roads and Aviation Department should develop the future improvement plan and plan lines for the County Expressway system. Right-of-way for expressway improvements should be preserved in accordance with these plans.

C-TR 31
The capacity of the highways and expressways should be increased where necessary to achieve objectives of county transportation plans. Facilitate the implementation of improvements recommended through the Countywide Transportation planning process.

C-TR 32
The commuter lane network (High Occupancy Vehicle) should be completed as the highest priority for roadway capacity improvements.

C-TR 33
Continue to seek funding from local, state and federal sources to implement the transportation improvements.

C-TR 34
Bicycling and walking should be encouraged and facilitated as energy conserving, non-polluting alternatives to automobile travel.

C-TR 35
A bicycle transit system should be provided that is safe and convenient for the user and which will provide for the travel needs of bicyclists.

C-TR 36
Facilities should be provided 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.

C-TR 37
All available funding options, including ISTEA funds, should be pursued for bicycle and pedestrian facility improvements.

C-TR 38
Ensure adequate air carrier, air cargo and general aviation capacity so as to meet current and projected demand for these facilities thereby supporting the county's economic development and social goals. Encourage airport growth that is compatible with nearby existing established neighborhoods.

C-TR 39
Protect all airports from encroachment by incompatible land uses that would interfere with their safe operation.

C-TR 40
Improve freeway and transit access to San Jose International Airport (Implementor: SJC).

C-TR 41
Support development of the California Corridor high-speed rail system as an alternative to short-range air travel, thereby reducing the demand for additional runway capacity at SJC.

Implementation Recommendations

C-TR(i) 21
Facilitate the construction of multi-modal transit stations to link the local transit system with regional and inter-regional transit systems. (Implementors: Peninsula Commute Joint Powers Board, Transit District, BART, Caltrans)

C-TR(i) 22
Continue to update the Countywide Transportation Plan (T-2000/T-2010) every two years. (Implementors: Transit District)

C-TR(i) 23
Adopt the Countywide Long Range Rail Master Plan as the basis for rail corridor development in Santa Clara County. (Implementors: Transit District)

C-TR(i) 24
Encourage and facilitate student use of public transit where it is available and convenient and encourage employee transit use and ridesharing by actively working with private employers and public agencies to:

a. Distribute route schedule information to employees and school districts;
b. Establish company and school outlets for the sale of transit passes;
c. Purchase transit passes in quantities and provide them to employees at a discount;
d. Provide connecting shuttle buses or vans between company parking lots and express bus stops or commuter train stations;
e. Examine innovative approaches to reducing single-driver commuting such as shuttle buses at lunch hour, parking fees on employee lots, revised zoning ordinances that will discourage auto usage and encouraging industry to locate for convenient access to transit routes. (Implementors: Employers, Developers, Cities, County, School Districts).

C-TR(i) 25
Continue to implement programs to make better use of the existing bus fleet including:

a. Reassigning buses from less heavily used routes to more heavily used ones.
b. Increasing the number of express bus routes;

(Implementors: County Transit District)

C-TR(i) 26
Expand the bus fleet when needed as funding becomes available. (Implementors: Transit District

C-TR(i) 27
Continue to replace or retrofit existing transit vehicles to make all transit vehicles fully accessible to the physically challenged. In addition, insure that all transit stops or stations are also fully accessible. (Implementors: Transit District, cities, developers)

C-TR(i) 28
Develop agreements to allow free transfers or reduced fare transfers between various public transit systems in the Bay Area. (Implementors: County Transit District, MTC).

C-TR(i) 29
Build attractive transit facilities, such as: passenger waiting shelters, major transit transfer stations, park and ride facilities, bicycle storage facilities at major transit stops and expand passenger facilities to support new routes (park-and- ride lots, bus shelters). (Implementors: County Transit District, Employers, Developers)

C-TR(i) 30
Acquire only those buses that meet or exceed Federal and State exhaust emission standards.

C-TR(i) 31
Add bike racks to bus routes where heavy passenger loads prohibit bringing bicycles on board the bus.

C-TR(i) 32
Continue to investigate and test innovative paratransit service options to improve cost-effectiveness and coordination of various paratransit services.

C-TR(i) 33
Implement the provisions of the ADA in cooperation with the paratransit providers.

C-TR(i) 34
Expand paratransit services commensurate with the increase in senior and mobility impaired population's needs.

C-TR(i) 35
Advocate coordination among the paratransit programs in areas such as service levels, fares, eligibility rules, and the ability to cross jurisdictional boundaries as recommended in the Regional Paratransit Plan.

C-TR(i) 36
Continue efforts to secure additional funding for expansion of paratransit services to meet the growing needs of the transit disabled population and continue efforts to identify cost effective alternatives for providing paratransit services.

C-TR(i) 37
Continue to maintain and improve the width and quality of the surface of the right-hand portion of existing roads so that they are suitable for bicycle travel, regardless of whether or not bikeways are designated.

C-TR(i) 38
Provide secure bicycle storage facilities at employment sites, public transit stations and schools. (Implementors: Employers, County, Cities, Peninsula Commute Joint Powers Board, Schools)

C-TR(i) 39
Design all future roads, bridges, and transit vehicles and facilities to accommodate non-motorized travel. Incorporate bicycle and pedestrian facilities into future projects including:

a. Development of new travel corridors such as rail transit and road projects.
b. Development of non-transportation corridors including utilities and river/creek rights of way.
c. Improvements to existing transportation corridors such as expressway, interchange, intersection and Commuter Lane projects.

C-TR(i) 40
Add and improve bicycle facilities on already existing roads, bridges and transit vehicles and within rail rights-of-way to accommodate non-motorized travel. (Implementors: Caltrans, County, Cities)

C-TR(i) 41
Periodically revise and publish maps indicating existing Countywide bikeway routes. Involve all jurisdictions in developing an agreed-upon definition of "bikeways". (Implementors: County, Cities)

C-TR(i) 42
Maintain and implement the Santa Clara County Bicycle Plan and subregional bicycle network.

C-TR(i) 43
Provide for foot and bicycle travel across existing barriers, such as creeks, railroad tracks and freeways. (Implementors: Cities, County, State)

C-TR(i) 44
Establish and maintain bicycle advisory committees and confer with representatives of recognized bicycle clubs/associations for a "needs list" of necessary bicycle safety improvements. (Implementors: Cities, County)

C-TR(i) 45
Continue to accommodate non-collapsible bicycles on CalTrain.

C-TR(i) 46
Implement the County policy to maximize bicycle access on expressways.

C-TR(i) 47
Incorporate bicycle and pedestrian facilities (e.g., bicycle and pedestrian access routes, showers, secure bicycle storage facilities) in site designs.

C-TR(i) 48
Develop a countywide airport master plan that would address the future aviation needs of the county — its residents and businesses — and the future development of all airports within Santa Clara County. Support continuing studies of general aviation system requirements particularly as they affect the future use of Moffett Field.

C-TR(i) 49
Encourage San Jose International Airport (SJC) to work with the three general aviation airports to ensure adequate future capacity within Santa Clara County to handle general aviation traffic displaced by the growth in air carrier or air cargo activity.

C-TR(i) 50
Develop necessary institutional arrangements to allow the preparation of a countywide airport master plan; consider the possibility of operating all public-use airports as a system under single management.

C-TR(i) 51
Implement the T-2010 recommendations relative to improving airport activity center access to increase the use of transit to SJC and to provide easier access to SJC by freeway and expressway.

C-TR(i) 52
Support and legally enforce Airport Land Use Commission (ALUC) actions to prevent incompatible land use around airports.

Strategy #4: Support New Transportation Technologies

A variety of existing and emerging technologies offer potential for managing congestion, improving the operation of roadway and transit systems, and alleviating travel demand, among other uses. These transportation-related technologies include facilities and communications technology that enable workers to "telecommute" from home or another location rather than commuting to a place of employment. They also include very sophisticated technologies for assisting travelers in route selection, avoiding congestion problems, for automated guidance and control of vehicles on roadways equipped for such purposes and propulsion for high speed passenger trains.

(see Intelligent Vehicle-Highway System sidebar for further information).

Research, development and experimentation with emerging technologies continues in an effort to bring the potential benefits to bear upon congestion problems facing major metropolitan areas. One of the most promising and cost-effective technologies is telecommuting. Santa Clara County, where computer and high technology industries predominate, could pioneer in developing innovative, efficient transportation alternatives, including telecommuting.

Although Intelligent Vehicle/Highway Systems (IVHS) technologies continue to undergo development and refinement, others such as Magnetic Levitation (Maglev) rail technology and automated guideways for bus transit systems are currently in use elsewhere in the world. As future plans and studies indicate a need or potential for such technologies, Santa Clara County should encourage their development and application where appropriate.

Policies and Implementation

C-TR 42
Development and application of advanced transportation-related technologies should be supported to meet current and future travel demand, minimize economic productivity losses due to roadway congestion, and increase travel safety.

C-TR 43
Upgrading the telecommunications infrastructure should be supported and encouraged as a means of enabling more telecommuting and the decentralization of work.

Intelligent Vehicle-Highway Systems

Advanced Traffic Management Systems (ATMS)

Traffic management systems use technology to improve efficiency of the highway network, reduce trip times, congestion and accidents. ATMS influence the pattern of route choice by providing early traffic incident detection and management. They are used for freeway management and for traffic signal control on urban arterials. Sensors and microprocessors locate disturbances in the freeway traffic flow and, working in concert with other techniques such as ramp metering, control the flow along freeways. Traffic signal controls automate fixed time signals to permit timing sequences to change as traffic conditions change.

Advanced Driver Information Systems (ADIS)

ADIS provides drivers with information on congestion, traffic conditions and alternative routes which allows the driver to use the highway network more efficiently through better route choice. Techniques for providing drivers with improved information are both external and internal to the vehicles. External techniques can range from rush-hour radio reports to sophisticated pre-trip electronic route planning. Onboard navigation and location systems provide real-time information within the vehicle. The information is provided on video display

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terminals (VDTs) in the car or dashboard signals and can be used for route planning and route navigation. Electronic route guidance systems provide real-time information on traffic and other conditions on the roadway network. VDTs show the the location of any traffic problems anywhere in the roadway network allowing the driver to avoid problem areas.

Automated Vehicle Control Systems (AVCS)

An automated vehicle control systems either helps the driver perform certain vehicle control functions or performs the functions itself on dedicated highways. This should result in greater speeds, reduced trip times and increased safety. These control systems can automatically adjust according to current operating conditions and intervene to manage critical situations automatically without the driver's intervention. These systems could achieve greater highway capacity, up to 3,600 vehicles per hour, since lanes widths are more narrow and distance between cars is minimal.

Public Transportation

Automated Guideway Transit (AGT)

Automated guideway transit systems "people movers," are computerized, driverless systems smaller in scale than traditional urban light or heavy rail systems. AFTs can meet peak demand periods with a relatively small infrastructure by operating at high frequencies. Since they are driverless they can provide cost savings through reduced wages and benefits. A major limitation of AGTs is that they must be grade separated.

Magnetic Levitation (Maglev)

Magnetic levitation provides a means of suspension for high-speed trains. Two basic kinds of Maglev are currently under development An attractive Maglev system uses the attraction between magnets of unlike polarity to lift the vehicle off the guideway. A repulsive Maglev system uses pairs of magnets of the same polarity to lift the vehicle as they repel each other. They operate quietly since there are no mechanical moving parts and can achieve speeds up to 300 mph. Limitations to using this technology in all parts of California are the need for a guideway with wide curves and gentle slope, requiring large amounts of right-of-way. Energy use and magnetic field exposure are also important issues. Because of their potentially high speeds, Maglev trains can be an effective replacement for short-range (300 miles or less) air travel.

Dual-Propulsion Bus Transit

In response to Environmental Protection Agency (EPA) requirements for cleaner operating buses, an increasing number of transit agencies are purchasing dual-propulsion buses. These vehicles can operate via their conventional diesel-powered engines as well as by electric catenary power. This is especially useful when buses must travel through long tunnels.

High Speed Trains

High speed trains can use conventional rail or Maglev technology. Fast trains can reach speeds of up to 300 miles per hour. There are several high speed train systems in operation throughout the world, mostly in Western Europe and Japan. Factors such as limited rights of way, grade separation and cost of electrification can hinder the implementation of high speed rail systems. High speed trains can substitute for air travel and the private vehicle for short-range inter-city or interregional trips. As such, they have the potential to alleviate growing air traffic congestion as well as roadway congestion.

Parks and Recreation

Countywide Issues and Policies

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- Strategies, Policies, and Implementation G-4
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  - Strategy #1: Plan for Trails
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Introduction

Summary

Through the remainder of this century and into the next, population growth, demographic change, and increasing urban intensification in Santa Clara County will be creating a growing demand for recreation. Public demand will increase both for parks and open space areas within and adjacent to the urban area, as well as for recreation areas in more natural settings that provide a welcome contrast to the fast pace and pressures of urban life.

Meeting this growth in recreation demand will be particularly challenging due to the limited public funding likely to be available during this period, and due to the need to balance recreation and environmental protection objectives to avoid the overuse and eventual destruction of the natural resources of our parks and public open space lands.

This chapter addresses three types of areas and facilities that can contribute both to meeting future recreation demand and to maintaining the county's natural resources and beauty:

- Regional Parks and Public Open Space Lands;
- Trails; and
- Scenic Highways.

The general strategies outlined for each of these areas are as follows:

Regional Parks and Public Open Space Lands

Strategy #1: Develop parks and public open space lands
Strategy #2: Improve accessibility
Strategy #3: Balance recreation and environmental objectives
Strategy #4: Facilitate interjurisdictional coordination
Strategy #5: Encourage private sector involvement

Trails and Pathways

Strategy #1: Plan for trails
Strategy #2: Implement the planned trail network
Strategy #3: Facilitate interjurisdictional coordination
Strategy #4: Balance recreation, environmental, and landowner concerns

Scenic Highways

Strategy #1: Designate scenic highways
Strategy #2: Protect scenic highway cooridors
Strategy #3: Develop complementary recreational facilities

Background

THE VISION OF "A NECKLACE OF PARKS"

The basic foundation for the "Regional Parks, Trails, and Scenic Highways Plan" within the County's General Plan was established in the late 1960s when a blue ribbon citizen advisory committee was established to develop a blueprint for the expansion of the county's regional park system.

Growth in the regional park system had not kept pace with the county's rapid population growth during the previous two decades, and community leaders felt it was important that a bold, long term plan be developed to remedy the rec-reational deficiencies that existed and to preserve significant open space resources that were threatened by the rapid pace of the sprawling development the county was then experiencing.

The regional parks, trails, and open space system envisioned in the plan they developed was often referred to as "a necklace of parks." It consisted of a series of major regional parks located in the foothills and mountains around the valley, similar to pearls on a necklace. These regional park "pearls" were intended to preserve, and make available for public recreation, examples of the county's finest natural resources. Recreational trails and scenic highways were proposed to link these regional

parks with one another as well as to provide access from the valley floor.

On the valley floor, the plan envisioned major streamside park chains — visual and recreational ribbons of green — passing through the urban area, providing recreation opportunities in themselves and also serving as important trail linkages to the nearby foothill, mountain, reservoir, and baylands parks.

Over the intervening decades, their far-sighted vision of "a necklace of parks" has gradually moved toward becoming a reality as expansion and development of the County's regional park system, the cities' park systems, and the open space preserve system of the Midpeninsula Regional Open Space District have occurred.

Although progress toward its completion may slow during the mid 1990s due to funding limitations, the vision remains alive as a positive blueprint for meeting current and long term recreation needs and for preserving portions of our county's unique open space heritage.

GROWTH IN RECREATION DEMAND AND DIVERSITY

Although implementation of the "necklace of parks" may slow somewhat, recreation demand in Santa Clara County will continue to increase through the remainder of this century and into the next in response to a number of factors, including:

- population growth, generally;
- growth in the population of seniors with more leisure time; and
- the accessibility of local recreation areas.

Between 1995 and 2010, Santa Clara County's population is projected to increase by more than 209,000 people — an increase roughly equivalent to the current populations of Santa Clara and Sunnyvale combined.

As the population grows, it will also be aging, which will mean that seniors with more leisure time available will constitute a larger part of our population. Due to public consciousness about fitness and health in recent decades, these seniors are likely to be healthier and more recreationally active longer in their lives than seniors of previous generations.

Growth in recreation demand is likely also to be driven by the supply of parks and open space lands that are easily accessible from the county's urban areas. Residents of Santa Clara County have a number of regional parks and other public open space lands that are only a short drive, hike, or bicycle ride from major residential and employment centers. This close proximity of public recreation areas helps account for why, according to State Parks Department surveys, northern California residents participate in outdoor recreation activities at higher rates than do residents of southern California where regional parks and other public open space lands tend to be farther away.

Growth in recreation demand is also likely to be accompanied by continued increasing diversity in the array of forms of public recreation. Just as the last decade has witnessed the emergence and growing popularity of various new types of recreation activity (e.g. off road bicycling, skateboarding, roller blading, etc.), the next decade will probably bring additional new forms of recreation as well. New developments in technology are likely to create new forms of recreation activity, as well as enabling persons of all physical capabilities to engage in a broader array of recreational activities.

Along with this increasing diversity of recreational activity will come the challenges of coping with pressures to create or set aside areas for these new forms of recreation as well as managing the conflicts that may arise among various recreational user groups seeking to use the same lands or facilities for different activities.

THE RECREATION CONSEQUENCES OF URBAN INTENSIFICATION

As Santa Clara County's population grows and as future growth is directed primarily into existing urban areas, selective portions of our cities will be evolving from predominantly suburban to more urban character. This will be particularly true along transit corridors, near

downtowns, and near major employment centers.

This selective urban intensification is likely to have two significant, and somewhat contradictory, impacts on parks and recreation demand. It will, first of all, focus greater attention on the need to provide parks and open space within easy access of these new urban centers to assure that they have the recreational amenities necessary to become livable urban communities.

High urban land costs, however, will generally preclude the acquisition of large parcels of land to create traditional, large urban parks. Consequently, more emphasis is likely to be given to:

- planned open space within larger scale, mixed use developments;
- smaller, neighborhood parks; and
- the completion of urban streamside and baylands park chains.

Linear parks passing through the urban area, such as those being developed along the Guadalupe River, Coyote Creek, Los Gatos Creek, and Stevens Creek can be implemented to a large degree on existing publicly-owned lands. Similarly, continued parks and recreation development within the large band of contiguous, publicly-owned lands in the baylands provides an opportunity for creation of a major, interconnected system of parks and public open space preserves adjacent to the urban area.

Second, as more people live within urban centers, the pressure to provide additional areas for parks and open space where people can escape the urban area to more natural surroundings in search of relaxation and recreation will also increase.

Both of these trends will create competing pressures for the allocation of limited parks and open space funds, and will create the need for local officials to try to achieve an appropriate balance between expenditures for close-in urban parks and for parks and open space lands in more natural, rural settings.

Regional Parks and Public Open Space Lands

Background

Opportunities for outdoor recreation amid the natural beauty and splendor of the California landscape are important ingredients contributing to the quality of life enjoyed by county residents. As Santa Clara County's urban area has expanded and its population has grown to more than one-and-a-half million people, the need to provide areas for existing and future County residents to get away from the pressures of the urban area to more natural settings where they can relax and enjoy closer contact with nature has increased greatly.

Santa Clara County has been blessed with a great diversity of natural resources and scenic beauty, ranging from the salt marshes of the baylands, to the rolling, oak-studded foothills, to the majestic redwood groves of the Santa Cruz Mountains, to the numerous flowing streams. These varied open space areas are part of a priceless legacy, an environmental heritage which must be preserved for the use and enjoyment of both present and future generations.

Many of the county's natural areas are being protected and made available to residents through public acquisition as parks or open space preserves by a number of different agencies, including the County Parks Department, various city parks departments, the Midpeninsula Regional Open Space District, the State Parks Department, and the San Francisco Bay National Wildlife Refuge.

As the county's population continues to grow, the growth in recreation demand will put increasing pressures on these parks and open space lands. A major challenge over the duration of this decade will be how to accommodate this increasing demand without overusing and ultimately degrading the natural resources that draw people to seek recreation on these lands.

Compounding this challenge will be the fiscal crises that state and local governments are currently experiencing, which will likely mean that there will be less money available to purchase additional parks and public open space lands, and possibly less money to pay for the development, operation, and maintenance of existing parks and open space lands.

Strategies, Policies, and Implementation

Given the above factors, the basic strategies concerning regional parks and public open space lands consist of the following:

Strategy #1: Develop Parks and Public Open Space Lands
Strategy #2: Improve Accessibility
Strategy #3: Balance Recreational and Environmental Objectives
Strategy #4: Facilitate Interjurisdictional Coordination
Strategy #5: Encourage Private Sector and Non-profit Involvement

Strategy #1: Develop Parks and Public Open Space Lands

The major focus of local parks and open space agencies over the foreseeable future is likely to be upon developing and managing their existing parks and open space preserves, rather than the purchase of substantial additional lands. Primary emphasis will be on developing additional recreational facilities to make existing lands serve more visitors.

Those additional land purchases that do occur are likely to be purchases that help round out the boundaries of existing parks and open space preserves or that complete missing links between them. (The Santa Clara County Open Space Authority, created in 1992, may become an exception to the previous generalizations about land acquisition, once it obtains a funding source.)

Although the short term future may not look particularly bright in terms of additional parks and open space purchases, it is important not to lose sight of the substantial progress that has been made during the last two decades toward realization of the vision of a necklace of regional parks and public open space lands surrounding the urban area and accessible by trails and streamside park chains. Further progress, however incremental, toward fulfillment of that dream will still provide lasting benefits for current and future generations.

Policies and Implementation

C-PR 1
An integrated and diverse system of accessible local and regional parks, scenic roads, trails, recreation facilities, and recreation services should be provided.

C-PR 2
Sufficient land should be acquired and held in the public domain to satisfy the recreation needs of current and future residents and to implement the trailside concept along our scenic roads.

C-PR 3
The County's regional park system should:
a. utilize the county's finest natural resources in meeting park and open space needs;
b. provide a balance of types of regional parks with a balanced geographical distribution;
c. provide an integrated park system with maximum continuity and a clear relationship of elements, using scenic roads, bikeways, and trails as important linkages; and
d. give structure and livability to the urban community.

C-PR 4
The public open space lands system should:
a. preserve visually and environmentally significant open space resources; and
b. provide for recreation activities compatible with the enjoyment and preservation of each site's natural resources, with trail linkages to adjacent and nearby regional park lands.

GC- PR 5
Water resource facilities, utility corridors, abandoned railroad tracks, and reclaimed solid waste disposal sites should be used for compatible recreational uses, where feasible.

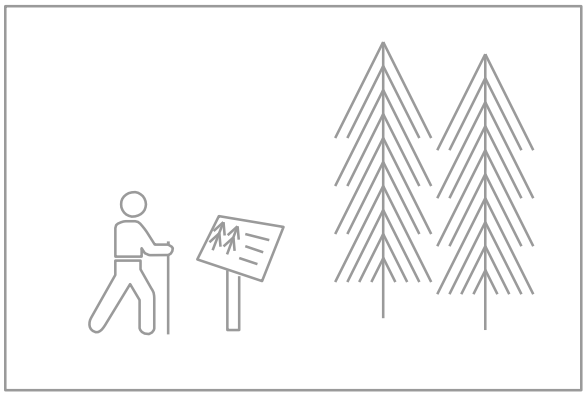
C-PR 6
The countywide regional parks plan should periodically be reviewed and revised to reflect current conditions, anticipated future needs, long term goals, and new opportunities.

Implementation Recommendations

C-PR(i) 1
An assured, predictable source of annual funding should continue to be provided for regional park acquisition, development, and maintenance.

C-PR(i) 2
Consideration, in parks and open space land acquisition planning and decisionmaking, should be given to the open space preservation priorities proposed by the Open Space Preservation 2020 Task Force.

C-PR(i) 3
Establish a program to review and revise the countywide regional parks plan.



Strategy #2: Improve Accessibility

Another important focus for local agencies over the remainder of this decade should be that of improving public access to and within parks and public open space lands.

One target of local efforts should be to improve access to regional parks and open space lands via modes other than the automobile. This means improving access via public transit, as well as providing trails and pathway access for pedestrians, runners, bicyclists and equestrians, as means of reducing traffic congestion and improving air quality.

Within regional parks and open space lands, more attention needs to be given to making facilities and programs more accessible to all members of our population, including those who may have physical limitations.

Our diverse population includes people of a wide range of ages and physical capabilities, each of whom is entitled to experience the wonders of our natural environment and the benefits of outdoor recreation on our public lands. To make these benefits more widely available, public parks and open space planning needs to become more creative in preparing master plans, developing new facilities, and redesigning existing facilities to make them more accessible to persons of all physical capabilities. The accessibility of recreation programs, too, must be improved.

Policies and Implementation

C-PR 7
Opportunities for access to regional parks and public open space lands via public transit, hiking, bicycling, and equestrian trails should be provided. Until public transit service is available, additional parking should be provided where needed.

C-PR 8
Facilities and programs within regional parks and public open space lands should be accessible to all persons, regardless of physical limitations, consistent with available financial resources, the constraints of natural topography, and natural resource conservation.

Implementation Recommendations

C-PR(i) 4
Provide public transit service to major regional parks, and develop hiking, bicycling, and equestrian trails to provide access to regional parks from the urban area to provide alternatives to private automobiles for access to recreation. (Implementors: County, Cities, Midpeninsula Regional Open Space District, State of California, Santa Clara Valley Water District)

C-PR(i) 5
Design, and redesign where necessary, facilities and programs within regional parks and public open space lands to be accessible to all persons, regardless of physical limitations, consistent with constraints of the natural landscape and natural resources of each site. Include accessibility considerations in the development of site master plans.

Strategy #3: Balance Recreational and Environmental Objectives

Management and development of Santa Clara County's regional parks and other public open space lands requires a careful balance between the sometimes conflicting objectives of providing for public recreation and preserving and enhancing the resources and processes of our natural environment.

The scenic beauty and natural resources of those lands closest to the urban area, because of their attractiveness and accessibility, often face the greatest recreational pressures. An estimated 500,000 people per year, for example, make use of the trails at Rancho San Antonio near Cupertino. The Los Gatos Creek Trail and the trails of the Palo Alto and Mountain View baylands Gare examples of other popular and heavily used recreation areas within or at the edge of the urban area.

As existing public recreation areas become more crowded, the pressures to develop additional recreational areas and facilities will increase. Since funds for acquisition of additional parks and public open space lands are likely to be quite limited for the foreseeable future, the most logical way to try to keep up with growth in recreation demand will be to provide additional recreational facilities on existing public lands.

In working to meet that growing demand, we must be careful not to overdevelop or overuse these lands to the point where their natural resources are seriously degraded and the quality of the recreational experience is substantially diminished. Care must particularly be taken to preserve and protect natural resources unique to these sites so that they will also be available for future generations to experience and enjoy.

Policies and Implementation

C-PR 9
The parks and recreation system should be designed and implemented to help attain open space and natural environment goals and policies.

C-PR 10
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, with particular attention to the preservation of unique, rare, or endangered resources (including historic and archeological sites, plant and animal species, special geologic formations, etc.).

C-PR 11
Park planning and development should take into account and seek to minimize potential impacts on adjacent property owners.

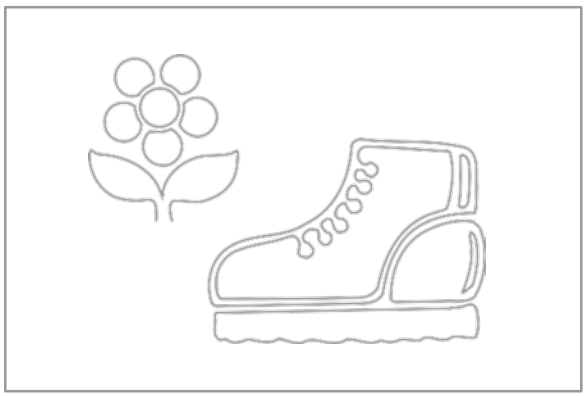
GC- PR 12
Parks and trails in remote areas, fire hazardous areas, and areas with inadequate access should be planned to provide the services or improvements necessary to provide for the safety and support of the public using the parks and to avoid negative impacts on the surrounding areas.

C-PR 13
Public recreation uses should not be allowed in areas where comparable private development would not be allowed, unless consistent with an adopted park master plan.

Implementation Recommendations

C-PR(i) 6
Include resource management plans within the master plans for individual regional parks and public open space lands. (Implementors: County, Cities, Midpeninsula Regional Open Space District, Santa Clara County Open Space Authority, State Parks Department, San Francisco Bay National Wildlife Refuge)

C-PR(i) 7
In conformance with the California Environmental Quality Act (CEQA), prepare environmental assessments for proposed master plans and development projects within regional parks and public open space lands. (Implementors: County, Cities, Midpeninsula Regional Open Space District, Santa Clara County Open Space Authority, State Parks Department, San Francisco Bay National Wildlife Refuge)



Strategy #4:
Facilitate Interjuisdictional Coordination

Numerous agencies are involved, either directly or indirectly, in the provision of public parks and open space lands in Santa Clara County, including city and County parks departments, the Midpeninsula Regional Open Space District, the State Parks Department, the San Francisco Bay National Wildlife Refuge, the Santa Clara Valley Water District, various local school districts, and the recently established Santa Clara County Open Space Authority.

Over the coming decade, coordination among these agencies is likely to become increasingly more important, due to:

- Increased emphasis on completing streamside park chains through the urban area, which pass through multiple jurisdictions and involve lands owned by several different public agencies.
- Outward expansion of the urban area to the point where some County parks that were established as rural parks years ago when lands around them were largely undeveloped are now surrounded by urbanization, thus creating opportunities for city/County cooperation in the management of these park lands.
- Budget problems faced by local parks and open space agencies, which can be alleviated somewhat by reducing costs through joint operating agreements (e.g. when two different agencies own lands in close proximity to one another, it may be cheaper for one to contract with the other to manage their lands jointly, rather than for each of them to manage their own lands individually).

To respond to these opportunities and necessities for interjurisdictional cooperation it may be necessary to establish formal mechanisms (e.g. coordinating committees) and agreements among various agencies to acquire, develop, and manage the regional parks and public open space system proposed in this plan.

Policies and Implementation

C-PR 14
Parks and recreation system planning, acquisition, development, and operation should be coordinated among cities, the County, State and Federal governments, school districts and special districts, and should take advantage of opportunities for linkages between adjacent publicly owned parks and open space lands.

C-PR 15
The provision of public regional parks and recreational facilities of countywide significance both in urban and rural areas shall be the responsibility of county government.

C-PR 16
The provision of neighborhood, community, and citywide parks and recreational facilities should be the responsibility of the cities and other appropriate agencies.

Implementation Recommendations

C-PR(i) 8
Seek adoption of the County's Regional Parks Plan by the cities to facilitate interjurisdictional cooperation in implementing the Plan. (Implementors: County, Cities)

C-PR(i) 9
Establish joint programs or other procedures for identifying and capitalizing upon potential opportunities for joint land acquisition, development and/or management of parks and open space lands. (Implementors: County, Cities, Midpeninsula Regional Open Space District, Santa Clara County Open Space Authority, Santa Clara Valley Water District, State Parks Department, San Francisco Bay National Wildlife Refuge)

Strategy #5:
Encourage Private Sector and Non-profit Involvement

Public parks and open space agencies do not have sufficient funding resources, lands, nor mandates to provide for all forms of outdoor recreation. Consequently some outdoor recreation needs may have to be met by the private sector or by non-profit organizations.

In Santa Clara County, facilities such as horse stables and recreational vehicle (RV) parks are provided almost exclusively by the private sector. Provision of these and other such private recreational facilities should be encouraged in appropriate locations, provided that they are of the proper scale and design for their surroundings.

In addition, nonprofit organizations and volunteers have provided valuable services to parks and open space agencies, and thus to the public as well, through a variety of activities ranging from aiding in land acquisition efforts, to running interpretive programs, to building and maintaining trails. These kinds of efforts should also be encouraged.

Increasing opportunities for public recreation may also be available if nonprofit organizations that own recreational lands make them available for appropriate public use when they are not in use by their members

Policies and Implementation

C-PR 17
The private sector and non-profit organizations should be encouraged to provide outdoor recreational opportunities. In rural areas, private recreational uses shall be low intensity.

C-PR 18
Individual citizens, community organizations, and businesses should be encouraged to aid in regional parks and open space acquisition, development, and maintenance.

GC-PR 19
The potential for encouraging nonprofit organizations that own recreation lands to make them available for appropriate public use should be explored.

Implementation Recommendations

C-PR(i) 10
Identify potential outdoor recreation needs that could be met by businesses and/or non-profit organizations. Encourage businesses and nonprofit organizations to provide for these needs in appropriate locations.

C-PR(i) 11
Establish a program to solicit support from individual citizens, community organizations, and businesses to aid in regional parks acquisition, development, and maintenance. (Implementor: County)

The Regional Parks, Trails, and Scenic Highways Plan Map

The current "Regional Parks, Trails, and Scenic Highways Plan" (hereafter referred to simply as the "Parks Plan") is a separately-published map that is an officially adopted part of the County's General Plan.* As its name implies, it contains information about three kinds of recreational facilities: regional parks, trails, and scenic highways.

The Parks Plan performs the following important roles and functions with regard to each of its three basic components. Regional Parks:

- Show the proposed countywide regional parks system, including "existing"** parks and public open space lands and the general locations of areas proposed for future public acquisition by the County and other public agencies.
- Provide the basis for expenditure of County Parks Charter Funds (i.e. expenditures of County Parks Charter funds for land acquisition must conform to the Plan)
- Provide a basis for interjurisdictional coordination and cooperation in the provision of parks and open space facilities of countywide significance

Trails:

- Shows the proposed countywide trail network, including "existing"** trails and the general locations of corridors within which future trails are proposed for implementation by the County and other public agencies. [Note: The proposed trails network shown on the Parks Plan is currently being reviewed by a special Trails Plan Committee established by the Board of Supervisors.]
- Provides a basis for interjurisdictional coordination and cooperation in the provision of trails of countywide significance
- Serves as the basis for County trail easement dedication requirements when development occurs in unincorporated areas within trail corridors shown on the Plan
- With a few exceptions, does not indicate proposed bicycle lane system. [note: The County Transportation Agency is currently updating the county Bikeways Plan.]

Scenic Highways:

- Identifies local roads designated as scenic highways, as well, as existing and proposed state scenic highways
- Indicates scenic roads in unincorporated rural areas subject to special scenic highway ordinance regulations and development reviews

Notes:

* The original printed, multicolored version of this map is out of print; black-and-white photocopied versions are available from the County Parks Department.

** The most recent version of this map was printed in 1980 and does not reflect public parks and open space acquisitions nor trails developed since then.

Trails and Pathways

Background

THE ROLES OF TRAILS

Trails in Santa Clara County serve the following roles:

• **Outdoor Recreation:** The activity of walking is consistently ranked the highest in terms of participation. Bicycling, and in particular mountain bicycling, continues to increase in popularity. Horseback riding has been, and continues to be, a strongly supported heritage of Santa Clara County. This is particularly true for the rural residents of the unincorporated areas of the County. The Countywide Trails Master Plan focuses only on non-motorized trail uses.

• **Transportation:** Trails provide an alternative form of travel to get to work or school, to go shopping, or to get to any number of other destination points including local and regional parks and open space preserves. For all county residents, trails, as an alternative to the private automobile, are energy-efficient, reduce reliance on fossil-fuels and benefit air quality.

• **Education:** To many individuals trails are also a means to an end. This is especially true for outdoor science teachers representing all levels of our educational system. Trails provide access to and through nature's outdoor laboratories.

• **Public Health and Physical Well-being:** Trail use supports exercise of any desired degree. Activities involving exercise are both healthy for the individual and reduce health care costs.

• **Social and Economic Well-being:** The positive benefits of well-managed trails on local economies and increased property values near trails in urban areas is well documented.

• **Alternative Emergency Access and Egress:** The subdivision of properties and intensification of land uses within wildland areas of the County increases the need for providing and maintaining emergency access/egress routes. Trails can serve as access routes in and out of an area blocked by fire, landslide, flood, or traffic.

History of Trails Planning in Santa Clara County

Planning for trails has been an integral part of land use planning in Santa Clara County for at least the past 30 years. In the late 1950s and early 1960s, plans were developed to provide hiking and bicycling trails as part of park chains proposed along most of the major streams that flow through the Santa Clara Valley, including Coyote Creek, the Guadalupe River, and Stevens Creek. Some of these proposed trails and parkways only now are becoming realities, much later and at much greater public expense than would have been necessary had they been implemented earlier.

In the early 1970s, a countywide network of recreation trails was included in the County's Regional Parks Plan. In 1974, the Santa Clara County Planning Policy Committee (PPC), the predecessor of the current intergovernmental History of Trails Planning in Santa Clara County Council (IGC), created a Trails and Pathways Subcommittee to develop a countywide trails and pathways master plan. The plan prepared by the Trails and Pathways Subcommittee was adopted by the PPC in 1978 and was subsequently incorporated into the "Regional Parks, Trails, and Scenic Highways Plan" in the Santa Clara County General Plan in 1980.

As the General Plan was being revised from 1991-94, a Trails Plan Advisory Committee was established by the County Board of Supervisors to review and update both the planned countywide trail routes and trail policies. The recommendations of that Committee, which concluded its review in mid-1995, were adopted and relevant portions incorporated within the General Plan as of November 14, 1995. For further understanding of the Trail Plan Advisory Committee's intent for the Countywide Trail Master Plan, refer to the Preamble, p. G-11.

Preamble

Trails Master Plan Advisory Committee

The Spirit of the Countywide Trails Master Plan Update

The spirit of the 1995 Countywide Trails Master Plan Update is one of cooperation and respect for divergent viewpoints. A collective goal of the plan update is that this plan will direct the County's trail implementation efforts well into the twenty-first century with a balanced regard for the public good and individual desires for privacy.

The Trails Master Plan Update affects a trails route map and policies for a countywide system that has been part of the County's General Plan since 1980. This update, and the Advisory Committee of citizens that authored it, embodies a spirit of collaboration.

For this plan to realize the County's vision of providing a network of trails that connects cities to one another, connects cities to the County's regional open space resources, connects County parks to County parks, and connects the northern and southern urbanized regions of the County, the plan identifies a contiguous trail system. To accomplish this objective, planned trails necessarily traverse lands in both public and private ownership. With an eye toward accommodating the burgeoning need for trail opportunities for a rapidly growing and urbanizing population, this plan's policies clearly recognize that a significant portion of the proposed trail system passes through, along, or close to private lands.

The intent of the plan's policies, therefore, is to direct the County as it incrementally implements the plan while adhering to these five beliefs:

- to build a realistic trail system that effectively meets the needs of County residents;
- to respect private property rights through due process in the detail planning and design of trails;
- to provide responsible trail management; inform the trail user that the idea of "shared-use" includes respecting adjacent land uses;
- to accept responsibility for any liability arising from the public's use of County trails; and
- to implement trails involving private property only when the landowner is a willing participant in the process.

By following these beliefs while implementing the trails section of the General Plan, the County will, over time, build an effective system of trails that gains momentum as it grows and also build trust in government.

It is the Trails Plan Advisory Committee's hope that their hard work and dedicated two-year effort in updating the Countywide Trails Master Plan is not an exercise in futility. When followed, this plan and its policies will ensure the way the master plan is used will balance the public good with private property rights. When followed, this plan also provides multiple benefits - physical and mental health, recreation, relaxation, transportation, education - to all the future generations of Santa Clara County residents.

Achieving such goals requires ongoing support and mutual cooperation from all sides: agencies, landowners, and communities. Respect for others must be the rule of the trail. This respect must permeate all aspects of trails planning, from its inception as part of the General Plan, through the acquisition of land, through the design and construction process, and all the way through operations, maintenance, and use.

Strategies, Policies and Implementation

Strategy #1: Plan for Trails

URBAN AREA TRAILS

Within the urban area of northern Santa Clara County, trails are currently limited to primarily:

- a few streamside park chains that are gradually emerging along Los Gatos, Coyote, Penitencia, Alamitos, and Stevens Creeks, and the Guadalupe River;
- a growing network of trails within and between the parks and public open space lands of the baylands; and
- bike lanes on city streets.

Expansion of the system of marked bicycle routes and related facilities to encourage bicycling within the urban area will come primarily from efforts to reduce traffic congestion and improve air quality. Growth of the recreational trail network within the urban area will come primarily from extension of streamside and baylands park chains.

RURAL AREA TRAILS

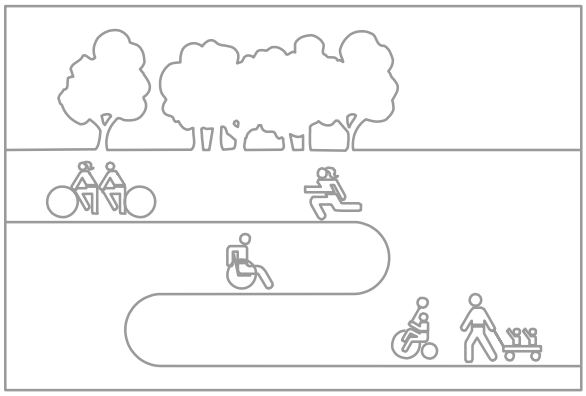
In the county's rural areas, most existing trails are located within publicly-owned parks and open space lands. Although some progress has been made in recent years, opportunities for hiking, bicycling, or horseback riding from one park to another or from the urban area to rural parks and open space preserves are still limited because a majority of the lands are in private ownership. Some existing rural trails are located on private lands, where trail easements have been purchased, donated, or dedicated as a condition of development approval for the lands they pass through. Typically, such trails are located near the edge of the property, when topography permits. While examples of public trail easements on private lands do exist, their numbers are relatively few.

Trails in areas with substantial rural residential development can be important components of local circulation systems, providing safe, offroad, pedestrian and equestrian access. In rural areas along the County road system, as in many rural residential communities like Los Altos Hills, trails effectively serve a similar function to sidewalks in urban areas. In areas with substantial rural residential development, the primary users and beneficiaries of most of these trails are likely to be local residents.

Both the recreational and circulation functions of trails will become even more important as our urban and rural populations continue to grow, as recreational demand increases, and as air quality and traffic congestion create a greater need to reduce unnecessary automobile usage.

STRATEGY #1 OBJECTIVES

- Identify trail routes which meet a public need while recognizing the rights of private property owners, safety requirements, and environmental protection goals.
- Provide trails within the County that offer a range of convenient urban, rural and open space experiences and a range of short to long trip opportunities.
- Maintain a Countywide trails master plan as the basis for the planning, coordination and implementation of a Countywide trail system.



➔ Policies and Implementation

C-PR 20
A countywide system of trails offering a variety of user experiences should be provided that includes: trails within and between parks and other publicly owned open space lands; trails that provide access from the urban area to these lands; trails that connect to trails of neighboring counties; trails that connect to transit facilities; trails that give the public environmentally superior alternative transportation routes and methods; trails that close strategic gaps in non-motorized transportation routes; trails that offer opportunities for maintaining personal health; trails that offer opportunities for outdoor education and recreation; and trails that could serve as emergency evacuation routes.

C-PR 20.1
Trail access should be provided for a range of user capabilities and needs (including persons with physical limitations) in a manner consistent with State and Federal regulations.

C-PR 20.2
Trails should be established along historically significant trail routes, whenever feasible.

C-PR 21
The countywide trail system should be linked to provide for regional trails including the Bay Area Ridge Trail, the Benito-Clara Trail; and the San Francisco Bay Trail systems encircling the urban areas of the County and the San Francisco Bay.

C-PR 21.1
Trails should be routed along scenic roads where such routing is feasible.

C-PR 22
The Countywide Trails Master Plan Map in the County's General Plan should periodically be reviewed and revised to reflect current conditions, anticipated future needs, long-term goals, and new opportunities.

C-PR 22.1
Encourage private developers to incorporate trail routes identified on the Countywide Trails Master Plan Map into their development project designs.

Implementation Recommendations

C-PR(i) 12
Include in the General Plan a Countywide Trails Master Plan Map that indicates the proposed trail routes of countywide significance. (Implementor: County).

C-PR(i) 13
Work with interested groups (including but not limited to: affected landowner groups; trail interest groups; and organizations representing persons with disabilities) in developing recommendations for specific design and management plans. The recommendations should be consistent with County, State, and Federal design and management regulations (see Countywide Trails Master Plan - Design and Management Guidelines), and reflective of environmental and safety constraints, community needs and the needs of the various user groups. (Implementor: County).

C-PR(i) 13.1
Label historically significant trails, scenic route trails, and regional trail links as such on the Countywide Trails Master Plan Map. (Implementor: County).

C-PR(i) 13.2
Periodically, or concurrent with updating the General Plan, update the Trails Section of the General Plan. Modifications to the Countywide Trails Master Plan Map should take into account: additions to the existing trail system; acquired trail rights-of-way; and any new, proposed or modified trail alignments. Modifications to the General Plan text should take into account: long-term community needs and goals for trails; environmental constraints; and potential impacts on adjacent lands. (Implementor: County).

C-PR(i) 13.3
Monitor proposed development, including General Plan amendments and zoning changes, and/or subdivision of properties with proposed trail routes, and work with property owners and/or their representatives to preserve the integrity of the proposed trail route in their project design. (Implementors: County, Cities,MROSD, SCCOSA, SCVWD)

Strategy #2:
Provide Recreation, Transportation, and Other Public Trail Needs in Balance with Environmental and Land Owner Concerns

A major purpose of trails is to provide opportunities for the public to engage in recreational activities such as walking, hiking, jogging, bicycling, and horseback riding through areas where they can experience Santa Clara County's varied natural environments. To assure that the resources that provide the basis for these recreational experiences are available to future generations as well, it is important that recreational trails be carefully located, designed, and maintained so that their impact on the landscape and the resources they traverse is minimized.

In some instances, such as where particularly sensitive resources or habitats are involved, it may be necessary for trails to be located so that they bypass such areas or can be managed so that trail use is limited during times when recreation would interfere with resource values (e.g. seasonal closure of trails near sensitive bird nesting areas during the mating season). In other instances, such as with agricultural spraying, certain occupational uses of adjacent lands may also necessitate specific trail location criteria or temporary closure.

Of particular importance to the County and cities within it are streamside areas that are usually scenic amenities providing a pleasant environment for trails. They are also, however, important wildlife habitat areas which are relatively fragile and can be easily damaged or disrupted. As with many of the streamside park chain proposals shown in the County's General Plan, trails near streams should receive detailed study prior to implementation. In areas with extensive residential development or in environmentally sensitive areas, it may be necessary to route trail segments away from creeks to avoid conflicts.

Whether located on public or private lands, trails are sometimes a cause of concern to adjacent property owners. Among the issues of concern to land owners are litter, trespass, vandalism, security, fire, and liability. Many of these concerns are addressed at the detailed phase of planning and design. Therefore, the property owner's concern extends to how the trail alignment, design, operations, and management come about. The desire to be an active participant in the design and management planning of a trail route is a keen one. After all, the property owner whose land is crossed by or is adjacent to a public trail experiences the results of the trails on a day-to-day basis.

STRATEGY #2 OBJECTIVE

- Ensure that trails planning accommodates public recreation and other needs while recognizing the rights of private property owners, the need for safety and the requiements of environmental protection.

Policies and Implementation

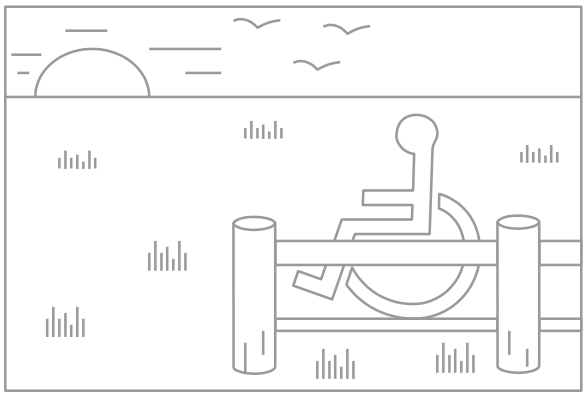
C-PR 23
Trail routes shall be located, designed and developed with sensitivity to their potential environmental, recreational, and other impacts on adjacent lands and private property.

C-PR 24
As provided for in the Resource Conservation Chapter, trails shall be located to recognize the resources and hazards of the areas they traverse, and to be protective of sensitive habitat areas such as wetlands and riparian corridors and other areas where sensitive species may be adversely affected.

C-PR 25
Trail Routes or Regional Staging Areas shown on the Countywide Trails Master Plan Map in areas currently designated on the County General Plan Land Use Map as Agriculture shall not be required (including easements) or developed outside of County road rights-of-way until or unless:
1. the land use designation is amended to a non-Agriculture designation, or
2. there is specific interest or consent expressed by a willing property owner/seller.

Where there is a specific interest or consent expressed by a willing property owner/seller, trails in areas with prime agricultural lands shall be developed in a manner that avoids any significant impact to the agricultural productivity of those lands.

C-PR 26
Trail Routes or Regional Staging Areas shown on the Countywide Trails Master Plan Map in areas currently designated as Ranchland on the County General Plan Land Use Map and actively used for ranching or other agricultural purposes shall not be required (including easements) or developed outside of County road rights-of-way until or unless:
1. The County is notified of a non-renewal of Williamson Act contract affecting the land on which the trail route or regional staging area would be located;
2. such time as the active ranching and/or agricultural use has been permanently abandoned;
3. the land use designation is amended to a non-ranchland designation, or
4. there is specific interest or consent expressed by a willing property owner/seller.



C-PR 26.1
Trail Routes or Regional Staging Areas shown on the Countywide Trails Master Plan Map in areas currently designated as Hillside on the County General Plan Land Use Map and actively used for ranching or other agricultural purposes shall not be required (including easements) or developed outside of County road rights-of-way until or unless:
1. the County is notified of a non-renewal of Williamson Act contract affecting the land on which the trail route or regional staging area would be located;
2. such time as active ranching and/or agricultural use has been permanently abandoned; or,
3. there is specific interest or consent expressed by a willing property owner / seller.

Implementation Recommendations

C-PR(i) 14
During trail design, notify and coordinate with affected landowners to incorporate measures into trail design and related management policies to accommodate the privacy, security and liability concerns of the landowner. Such measures could include, but are not limited to: fencing or barrier planting that discourages trespassing; signage; scheduling of maintenance; patrol scheduling; and indemnity agreements to protect the landowner and affected landowners from liability for injuries to trail users. (Implementors: County, Cities, MROSD, SCCOSA).

C-PR(i) 15
Prior to developing any new trail route for public use, prepare design and management plans that ensure provision of services necessary to provide for the safety and support of trail users and affected landowners, and respond to the unique safety and use concerns associated with highway safety, traffic operations, public transit, and businesses such as quality water source development, intensive agriculture, grazing, mining, railroads, and defense research and testing industries. (see Countywide Trails Master Plan - Design and Management Guidelines). (Implementors: County, Cities, MROSD, SCCOSA).

C-PR(i) 16
Develop design guidelines to ensure that new trails meet established safety standards and minimize user conflicts. (see Countywide Trails Master Plan - Design and Management Guidelines). Prior to developing new trail routes for public use, ensure that services and improvements necessary for the safety and support of the public using the trail are provided. Such services and improvements should contain, at a minimum, adequate parking, potable water supply and sanitary facilities, and emergency telephones and access. Reasonable police and fire protection shall be available. (Implementors: County, Cities, MROSD, SCCOSA, SCVWD).

C-PR(i) 17
Develop design guidelines that ensure sensitive species and the habitats they rely on shall be protected, and where possible enhanced, by trail development and trail use (see Countywide Trails Master Plan - Design and Management Guidelines). (Implementor: County).

C-PR(i) 17.1
Provide a footnote on the Countywide Trails Master Plan Map that repeats the above policies relating to areas currently designated as Agriculture, Ranchland, r Hillside on the County General Plan Land Use Map. (Implementor: County).

Strategy #3:
Implement the Planned Trails Network

SUCCESS BASED ON PERSEVERANCE

The Los Gatos Creek Trail has taken more than 25 years to develop to its current state extending nearly all the way from Lexington Reservoir to the Willow Glen area of San Jose. It is one of the most popular and heavily-used trails for both recreation and transportation in Santa Clara County. Its very existence is the result of foresight, hard work, and perseverance over a long period of time by local government officials, parks and planning commissioners, agency staff, property owners and dedicated citizens who have had the vision to see the benefits of completing such a trail and have devoted their energies to seeing it accomplished. Most of the trails in the proposed countywide network of trails are not planned to reach the level of use or popularity that the Los Gatos Creek Trail currently enjoys, but each trail route is still important for the functions it performs in its particular location. And each trail will be completed only if local government officials make the decisions necessary to transform these trail proposals from lines on plan maps to tangible, usable trails in the community.

USE OF MULTIPLE IMPLEMENTATION TOOLS

Implementation of the planned trail network will require the use of a variety of tools for acquisition, development, operations and maintenance. For example, some of the tools for obtaining trail routes include:

- construction of trails on existing public lands, possibly involving joint use agreements with public agencies other than parks and open space agencies (e.g. flood control agencies, highway departments, school districts, etc.);
- purchase of additional lands or trail easements;
- obtaining gifts of trail easements from property owners;
- requesting dedication of trail easements as development occurs along proposed trail routes;
- development fees or assessment districts;
- use of volunteer efforts, non-profit organizations, and land trusts; and
- other innovative means for preserving and implementing proposed trail alignments.

Which of these tools is most appropriate in a particular situation will necessarily depend upon the special circumstances of that situation.

STRATEGY #3 OBJECTIVE

- Successfully implement the trails plan in a manner that reflects current and future opulation patterns and the recreation and other needs of County residents.

➔ Policies and Implementation

C-PR 27
The proposed countywide trail network should be implemented using a variety of methods that take advantage of acceptable implementation opportunities as they arise.

C-PR 27.1
The County shall coordinate with landowners whose property may be affected by proposed trails identified on the Countywide Trails Master Plan Map to include the landowner's interests and concerns related to trail implementation when detail design and management plans are prepared.

C-PR 28
Trail routes shown on the Countywide Trails Master Plan Map that cross privately-owned lands shown as Agriculture, Ranchland or Hillside on the General Plan Land Use Map will only be acquired from a willing property owner/seller.

C-PR 28.1
Information shall be made available to landowners from whom trail easement dedications may be required or requested concerning laws that limit landowner liability.

C-PR 28.2
The County shall support amending state legislation that limits the liability of landowners immediately adjoining public trails for injuries to trail users to include language that defines entry for a recreation purpose to include any entry upon property from a public trail designated in a City or County General Plan. The text of the existing state law protecting property owners from liability to recreational users of private property is included in the appendix to the Santa Clara County Trails Master Plan Update. (Implementor: County).

C-PR 28.3
In coordination with the County Parks and Recreation Department, cities, public entities, organizations, and private citizens should be encouraged to implement the trails plan where practical and feasible.

C-PR 28.4
Development projects proposed on lands that include a trail as shown on the Countywide Trails Master Plan Map may be required to dedicate and/or improve such trail to the extent there is a nexus between the impacts of the proposed development and the dedication/improvement requirement. The dedication/improvement requirement shall be roughly proportional to the impacts of the proposed development. (Board of Supervisors Trail Easement Dedication Policies and Practices, Jan. 1992)

C-PR 29
Annexation of lands that include trails shown on the Countywide Trails Master Plan Map shall be conditioned on the annexing jurisdiction's adoption of relevant County trail plans and implementation of regional trail routes.

C-PR 29.1
Trails shall be considered as development projects when on private land.

Implementation Recommendations

C-PR(i) 18
Prepare implementation plans indicating the proposed methods to be used to obtain, develop, operate, and maintain individual trail routes or trail segments. Revise these plans, as needed, to respond to new opportunities that may arise. (Implementors: County, Cities, MROSD, SCCOSA).

C-PR(i) 18.1
As a high priority, establish an evenly-balanced review committee, reasonably representative of the cultural diversity of the community, composed of property owners and trail interests, appointed by the Board of Supervisors to work with County staff to analyze the feasibility and acceptability of specific methods available to fund trail acquisition, development, operations, and maintenance including but not limited to the following:

1. user fees for recreational services including equipment rentals, parking and use of facilities (e.g. picnic areas, etc.);
2. gasoline, hotel or other tax increment for trail implementation;

3. Landscaping and Lighting Act assessment district financing;
4. development fee and/or dedication requirements based on the impact of proposed new development on trail needs;
5. encouraging and accepting gifts; and
6. creating incentives for trail dedication and improvement through density bonuses and transfer of development credits.

(Implementor: County).

C-PR(i) 18.2
Take all steps necessary to implement acceptable funding methods approved by the Board of Supervisors (e.g. completion of studies pursuant to Government Code section 66000), development and adoption of ordinance(s), surveys, and elections, as necessary. (Implementors: County, Cities, MROSD, SCCOSA).

C-PR(i) 18.3
Notify landowners in unincorporated County areas whose property may be affected by a proposed trail route identified as "high priority" on the Countywide Trails Master Plan Map. Said landowners shall be informed of the process to be used in determining whether to proceed with acquisition, and consulted to determine their interests and concerns related to the proposed trail. If the County determines, based on its evaluation of trail needs and acquisition priorities, available funding, and other factors, that it wishes to purchase land along a proposed trail route, the County shall notify the affected landowners and initiate a dialogue regarding the County's proposed acquisition. (Implementor: County).

C-PR(i) 18.4
Indemnify all grantors of trail easements and other owners of lands immediately adjoining County trails from liability for injuries suffered by users of the adjoining trails. The indemnity shall not apply to injuries caused by a landowner's willful or malicious conduct. The indemnity shall include the costs of defending the landowner against all liability claims brought by users of County trails as well as the costs of damage awards and other costs associated with such claims. (Implementor: County).

C-PR(i) 18.5
Provide funding and technical assistance for the completion of studies pursuant to Government Code section 66000, surveys, engineering reports, ordinances and other technical efforts that are prerequisites to trail funding mechanisms. (Implementors: County, Cities, MROSD, SCCOSA).

C-PR(i) 18.6
Establish "Friends of the Santa Clara County Trails Plan" (Friends), comprising a balance of property rights advocates and supporters of trails, to assist the County Parks and Recreation Department in implementing the trails plan. Programs the Friends would have responsibility for could include, but not be limited to:

1. a corporate endowment fund;
2. an "adopt-a trail" program;
3. educational programs;
4. other fund-raising activities;
5. promoting bond issues to fund acquisition;
6. providing information and technical services to neighborhoods along trail routes;
7. trail maintenance, construction and patrol activities; and
8. utilization of volunteer trail patrol.

(Implementor: County).

C-PR(i) 18.7
Condition the development of new trails for public use on the availability of adequate resources in conformance with adopted trail management guidelines (see Countywide Trails Master Plan - Design and Management Guidelines). (Implementor: County).

C-PR(i) 18.8
Accept and require, to the extent necessary to mitigate the impacts of the proposed development, trail and pathway easements, right-of-way dedications and/or improvements as part of land development approvals in areas planned for inclusion in the countywide trail system of the General Plan. (Implementors: County, Cities).

C-PR(i) 18.9
Negotiate conditions in annexation agreements to assure the implementation and maintenance of regional trail routes. (Implementors: County, Cities, LAFCO).

C-PR(i) 18.10
Review proposed trails for their potential environmental impacts in accordance with the California Environmental Quality Act. (Implementor: County).

C-PR(i) 18.11
Prior to trail development, ensure that all regulations and guidelines applicable to trails have been met, including noticing requirements as set forth in the Countywide Trails Master Plan - Trail Design and Management Guidelines. (Implementor: County).

C-PR(i) 19
Decisions made by the County Parks and Recreation Department concerning trail outes and regional staging areas may be appealed to the Board of Supervisors. (Implementor: County).

Strategy #4: Adequately Operate and Maintain Trails

EFFICIENCY, EFFECTIVENESS, SAFETY AND SECURITY

Trails, when managed and used properly, become an amenity. However, it may take only one example of failure to jeopardize public support for trails. One aspect of a trail system that is often not discussed because it represents ongoing and real costs, but is every bit as important as siting and design to the trail user, property owner, and surrounding community, is the trail's operations and maintenance. A well-maintained trail encourages use which, in turn, discourages misuse. Many of the fears of nearby residents and potential trail users about trails are alleviated with staff presence and care.

INVOLVING VOLUNTEERS

As the trail network grows and as public trail use increases, the challenge of patrolling and maintaining these trails will also increase, perhaps faster than the resources of the public parks and open space agencies responsible for them. To help assure that trails remain usable and safe, public agencies may need to rely more on individual volunteers as well as nonprofit organizations (including trail user groups) for assistance in building and maintaining trails.

STRATEGY #4 OBJECTIVE

- Operate and maintain trails so that user safety, resource conditions, and adjacent land uses are not compromised.

Policies and Implementation

C-PR 30
Trails shall be temporarily closed when conditions become unsafe or environmental resources are severely impacted. Such conditions could include soil erosion, flooding, fire hazard, environmental damage, or failure to follow the specific trail management plan (see Countywide Trails Master Plan - Design and Management Guidelines).

C-PR 30.1
Levels-of-use and types-of-use on trails shall be controlled to avoid unsafe use conditions or severe environmental degradation.

C-PR 30.2
The County Parks and Recreation Department shall provide adequate ongoing maintenance of its trail system.

C-PR 30.3
Neighborhood volunteers and other groups should be encouraged to provide trail support services ranging from "trail watch" and clean up activities to annual maintenance and construction.

C-PR 31
Use of motorized vehicles on trails shall be prohibited, except for wheelchairs, maintenance, and emergency vehicles.

C-PR 32
All trails should be marked. Signed information should be provided to encourage responsible trail use. Appropriate markers should be established along historically significant trail routes.

C-PR 33
Maps and trail guides should be made available to the public to increase awareness of existing public trails.

Implementation Recommendations

C-PR(i) 19.1
Develop a monitoring program for use by the lead agency in evaluating current conditions and determining whether or not new trails or trail management programs, including maintenance, reconstruction, education and use regulations, are effective in addressing user conflicts, safety issues and environmental impacts; and recommending changes if necessary. (Implementors: County, Cities, MROSD, SCCOSA).

C-PR(i) 19.2
Based upon trail monitoring, develop guidelines for procedures to temporarily close trails and implement steps necessary to correct problems requiring closure. (Implementors: County, Cities, MROSD, SCCOSA, SCVWD).

C-PR(i) 19.3
Assign responsibility for the maintenance of County-owned trails to the County Parks and Recreation Department unless other trail managing organizations agree to assume the responsibility for maintenance consistent with County policies and guidelines. (Implementors: County, Cities, MROSD, SCCOSA, Transportation Agency, SCVWD).

C-PR(i) 19.4
Condition the authorization of County funds to Cities for implementing trails shown on the Countywide Trails Master Plan Map on their ability to operate and maintain the trail based on applicable County policies and guidelines (see Countywide Trails Master Plan - Design and Management Guidelines). (Implementors: County, Transportation Agency).

C-PR(i) 19.5
Provide information and technical services to neighborhoods surrounding trails on how to establish adopt-a-trail groups. (Implementors: County, Cities, MROSD, SCCOSA, SCVWD, CDRP, SFBNWR, non-profit organizations).

C-PR(i) 19.6
Design trail access points to ensure that off-road motorized vehicles do not use trails except for maintenance and emergency purposes or wheelchair access. (Implementor: County).

C-PR(i) 19.7
Develop trail design criteria that discourage inappropriate use of trails. (see Countywide Trails Master Plan - Design and Management Guidelines). (Implementor: County).

C-PR(i) 19.8
Clearly sign trails. Provide trail users with information regarding property rights in order to minimize public/private use conflicts and trespassing. (Implementors: County, MROSD, SCCOSA, CDRP, SFBNWR, non-profit organizations).

C-PR(i) 19.9
Publish and periodically update maps and guides to exsting public trails and pathways. (Implementors: County, Cities, MROSD, SCCOSA, CDRP, SFBNWR, non-profit organizations).

Strategy #5:
Establish Priorities

A LONG TERM PROCESS

Realization of a countywide trail network and the individual trails within it is a challenging, lengthy, and delicate process that will take many years to accomplish. In many instances, it will quite literally be a gift that one generation provides to the next.

Developing a trail network is like putting together a jig-saw puzzle — it must be accomplished one piece at a time as opportunities arise. No government agency currently has or is ever likely to have in the near term all the money that might be required to go out and purchase all the land and/or easements needed to implement all of a major trail. Consequently, the implementation of countywide trails will have to continue to take place over a long period Implementation Recommendations of time, using a variety of

processes, on a case-by-case basis, as opportunities arise and resources are available.

SHORT-TERM HORIZONS

Regardless of how long it takes to see a trail idea become a reality, the value of completing a pre-defined, specific goal in the short term by creating a new trail that becomes a useful and viable part of the community is considerable. One success story only builds momentum for the next. Given limited discretionary funds for public trails, focused priorities help to use those funds wisely.

STRATEGY #5 OBJECTIVE

Prioritize trals for acquisition and development in a manner that provides the maximum benefit given the available public and private resources.

➔ ***Policies and Implementation***

C-PR 33.1
Trail routes shown on the Countywide Trails Master Plan Map should be prioritized. (see Trail Priorities).

C-PR 33.2
Criteria used to prioritize trail routes shall include: need for trail uses; compatibility of the trail route with adjoining property; trail usefulness; complexity of land acquisition; opportunities for a large number of users; safety concerns; financial considerations; need for trail settings; and opportunities for a sense of remoteness.

Implementation Recommendations

C-PR(i) 19.10
Maintain a list of prioities for trail acquisition and development through purchase, dedication or other means. (Implementors: County, Cities, MROSD, SCCOSA).

➡ ***Strategy #6: Facilitate Inter-Jurisdictional Coordination***

Implementation of the countywide system of trails will require substantial effort and cooperation among the fifteen cities, the County, and various other agencies. Most of the proposed trails pass through several jurisdictions. Within the urban area, most of the proposed trails run alongside major streams, thus making the Santa Clara Valley Water District an important agency in the implementation of these trails.

Examples of successful inter-jurisdictional cooperation in the provision of recreational trails within the urban area already exist. Along Los Gatos Creek, for example, the cities of Los Gatos, Campbell, and San Jose, the County, the Santa Clara Valley Water District, and local school districts have worked together to create several miles of continuous hiking and bicycling trails linking parks and recreation areas along the way.

An important first step toward further implementation of a countywide trail system would be for the cities and other appropriate jurisdictions to incorporate the proposed trail system into their local plans, if they have not already done so. A next step would be for these jurisdictions to establish coordinating committees to work out the details for implementing particular segments of the countywide trail system. The way the Los Gatos Creek Trail has been implemented over the past few years provides a good model of how such cooperation and coordination f effort can be accomplished.

STRATEGY OBJECTIVE

- Coordinate trails planning within the County as well as with adjacent jurisdictions.

Policies and Implementation

C-PR 33.3
Trail planning, acquisition, development, and management of trail routes shown on the Countywide Trails Master Plan Map should be coordinated among the various local, regional, state and federal agencies which provide trails or funding for trails.

C-PR 33.4
Trail acquisition responsibilities should be established on a project-by-project basis, and should be coordinated with all jurisdictions involved in each trail route.

C-PR 33.5
Public improvement projects, such as road widenings, bridge construction, and flood control projects, that may impact existing or proposed trails should be designed to facilitate provision of shared use.

Implementation Recommendations

C-PR(i) 19.11
Establish a Countywide Trails Technical Staff Group overseen by the County Parks and Recreation Department, with representation from participating county, city, special districts, and other agencies, for the purpose of coordinating the implementation of the County's trails plan and policies in a manner that is compatible with each participating jurisdiction's needs and desires and is reflective of the guidelines for implementing the countywide trail system. (see Countywide Trails Master Plan - Design and Management Guidelines). Among other duties, the Staff Group should be charged with the following:

1. establishment of consistent trail designs that benefit the user and affected properties;
2. coordination of specific trail routes' siting and design;
3. recommendations to appropriate agencies for creation of joint powers agreements for the acquisition, development and maintenance of specific trail routes;
4. development of implementation and management plans for inter-jurisdictional trail routes; and
5. prioritization of trail routes for funding purposes.

(Implementors: County, Cities, MROSD, SCCOSA, Transportation Agency, SCVWD, CDRP, CDF).

C-PR(i) 19.12
Develop agreements for funding, interagency planning, acquisition, development and maintenance of countywide trails and trail segments with cities where the City has adopted relevant provisions of the Countywide Trails Master Plan and commits to implement and maintain a priority trail route. (Implementors: County, Cities, MROSD, SCCOSA, Transportation Agency, SCVWD).

C-PR(i) 19.13
Organize periodic meetings with adjacent cities and counties to coordinate the completion and management of regional trails which extend beyond County lines. (Implementors: County, Cities, MROSD, SCCOSA, SFBNWR)

C-PR(i) 19.14
Encourage the adoption of appropriate portions of the Countywide Trails Master Plan Map of the County's General Plan as part of local general plans, parks and open space master plans, and public facilities plans. (Implementors: County, Cities, MROSD, SCCOSA, Transportation Agency, SCVWD, LAFCO).

C-PR(i) 19.15
As additional public open space is acquired in the County, work with the appropriate entities to determine whether additional regional trail routes within the open space acquired should be identified on the Countywide Trails Master Plan Map as proposed trail routes. Propose amendments to the Countywide Trails Master Plan Map accordingly. (Implementors: County, Cities, MROSD, SCCOSA, SCVWD)

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Note: Trails & Pathways Section of the Parks & Recreation Chapter of the General Plan, Book A for Countywide Issues and Policies, was amended Nov. 14, 1995, to supersede the previous section in its entirety.{File 6095-00--00-95GP}

Scenic Highways

Background

THE FUNCTIONS OF SCENIC HIGHWAYS

The scenic roads of Santa Clara County serve a variety of purposes of fundamental importance:

- Some of them provide access from the urban area to parks and public open space lands in the foothills and mountains, and thus contribute to the quality of the recreation experience of urban dwellers seeking escape to the beauty and tranquillity of the county's natural areas.
- Some serve as major transportation corridors into the county and thus give travelers and tourists entering the county their first impression of the county.
- • Some are major commute routes and thus provide scenic relief to harried commuters.
- • Others are minor roads that serve as the access to rural areas and are part of the landscape enjoyed by rural residents.

OVERVIEW OF SCENIC HIGHWAYS IN THE COUNTY

Santa Clara County has long been a leader in the establishment of scenic highway systems in California and has officially recognized the scenic and recreational values of the county's roads in previous elements of the General Plan. As long ago as 1939, the County established scenic setbacks and enacted development regulations and architectural review procedures to protect the scenic character of the landscape along the county's highways. In the 1960s, the County was a leader in a four-county effort to try to establish the Skyline Scenic Recreation Route in the Santa Cruz Mountains from San Francisco to Monterey County.

The County's General Plan considers scenic highways to be important links in the county's recreation and transportation systems and proposes three basic strategies to protect and enhance them, ranging from designation, to protection, to development of complementary facilities.

The process of establishing scenic highways generally involves two basic steps:

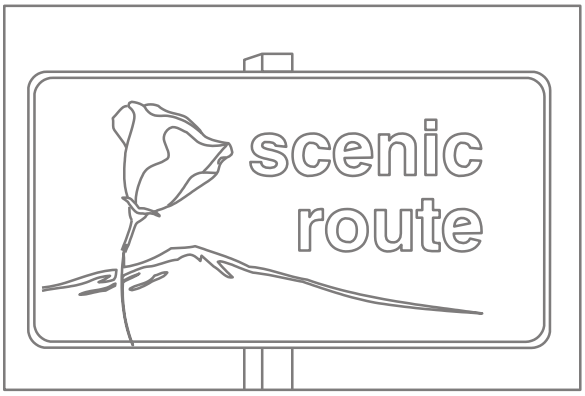
1. designating the highway as scenic; and
2. applying appropriate controls to assure the protection of scenic resources along the designated route.

In some instances, a third step of developing complimentary recreation facilities (e.g. rest stops, turnouts at scenic vistas, etc.) may also be involved. The sequence in which the first two steps are taken may vary, depending upon whether a local or a state highway is involved.

Strategies, Policies and Implementation

Strategy #1:
Designate Scenic Highways

The scenic highway system addressed in this Plan includes County-designated scenic highways and State-designated scenic highways. It does not include the many urban roads designated as scenic by individual cities.



ELEMENTS OF THE SANTA CLARA COUNTY SCENIC ROAD SYSTEM

The Scenic Road System of Santa Clara County includes three basic classifications:

- state scenic routes within the county (which includes all state highways currently designated by the state as scenic highways or proposed for such designation);
- county scenic routes, which includes scenic freeways (those not proposed for state scenic highway designation) and expressways, scenic arterial routes, and scenic rural roads; and
- local roads requiring scenic protection.

DESIGNATING SCENIC HIGHWAYS

State scenic highways are officially designated in a two part process, requiring action by both the State and the local jurisdiction. First, the state highway must be placed on the "California Master Plan of State Highways Eligible for Official Scenic Highway Designation" by the State Legislature, an action usually initiated locally. Then it must be designated a state scenic highway by CalTrans, following a CalTrans study to evaluating the geographic extent of the scenic corridor that should be protected and the adequacy of the local jurisdiction's scenic highway protection program.

[see sidebars for more complete descriptions of state scenic highway designation process and the current status of highways proposed for state scenic highway designation]

County designation of local scenic highways, particularly in rural unincorporated areas, is generally a much simpler process, since it involves only action by the County to designate it on its scenic highways plan map. (County designated routes may be included in the State system, even though they are not state highways.) Designation of scenic highways passing through urban areas is somewhat more complex since it may also require designation by various cities as well.

➔ *Policies and Implementation*

C-PR 34
Local and state roads and highways traversing Santa Clara County's scenic rural and urban areas should be designated and protected as local or state scenic highways.

C-PR 35
A system of scenic roads should be designated linking the urban area with the rural and open space areas, with careful consideration of fire risk, hazards, and protection of natural resources.

C-PR 36
The County's scenic highways plan should be reviewed and revised periodically.

Implementation Recommendations

C-PR(i) 20
Designate, as official scenic highways, all Santa Clara County roads shown in the "California Master Plan of Scenic Highways Eligible for Official Scenic Highway Designation". (Implementor: State Legislature)

C-PR(i) 21
Add the following highways to the State Master Plan for Scenic Highways and designate them as official State scenic highways:

a. the South Valley Freeway (Highway 101);
b. Hecker Pass Highway (Highway 152);
c. Highway 17 from Los Gatos to Campbell;
d. Freeway 680; and e. the portion of Freeway 280 between Highway 17/880 and Highway 101.

(Implementors: State Legislature, CalTrans)

C-PR(i) 22
Designate as scenic highways in the County's General Plan those roads warranting scenic highway status. (Implementors: County)

C-PR(i) 23
Seek city scenic highway designations for those freeways and expressways designated in the County's General Plan as scenic highways. (Implementors: County, cities)

Scenic Highway Designations in the County's General Plan

The Santa Clara County Scenic Road System

The Scenic Road System of Santa Clara County consists of all present 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. In addition to the scenic road system, local roads requiring scenic protection are included.

Freeways and expressways have been included in the County Scenic Road System to give recognition to several outstanding examples of urban road design, and to promote the protection of scenic surroundings of notable urban and rural routes. The expressways and freeways included in the County Scenic Road System are situated in scenic areas, have had careful landscaping treatment which enhances their scenic value, or they are combined with existing or planned linear parks.

Scenic arterial routes form the foundation of the County Scenic Road System. They afford the motorist beautiful vistas from good quality roads which are planned to provide appropriate public facilities for both the enjoyment of the scenery and the comfort of the driving public. For the most part these are not individual roads but groups of interconnecting roads which allow continuous movement through significant portions of the county. Many connect with the state scenic routes. And along with such state routes as Skyline and Hecker Pass Highway, the scenic arterials offer the best combinations of scenic beauty, environmental variety, road quality and planned public facilities that the county can offer.

Scenic rural roads include a great variety of settings, road conditions, and local circumstances. In scenic quality many of these roads fully equal the scenic arterial routes and the state scenic highways, but each road has a flaw. Some are dead-end roads, some have no present public facilities or public points of access off the road itself, some fail to connect with other scenic roads, several are extremely narrow, some follow dangerously tortuous paths, and some have substandard paving conditions. Many of the roads connect to the scenic arterial routes and offer pleasant side trips. As road conditions are improved and as the regional parks plan is implemented, some of the roads may be reclassified as scenic arterial routes.

Other Local Scenic Roads

In addition to the scenic roads and routes above, Santa Clara County has a number of very scenic local roads for which there are no park plans or other plans for public facilities. Road conditions for these local roads range from good to very poor. Many are dead-end roads intended only to serve those living along the sides of the roads. These roads are included in this plan in recognition of their scenic aspects and the need for protection of their scenic setting. All local roads included in this report have already been given scenic zoning or have previously been identified as scenic routes in elements of the General Plan.

Strategy #2:
Protect Scenic Highway Corridors

Although designation of scenic highways may, in some cases, involve both local jurisdictions and the State, the responsibility for protecting scenic highways once they are designated lies exclusively with the local jurisdictions that have the authority to control land use along these scenic highways.

Local ordinances to protect scenic highways generally include a combination of: controls over signs and billboards (including prohibition of off-site signs), setbacks of development from the highway, and review and conditioning of the design of proposed development to assure compatibility.

Policies and Implementation

C-PR 37
The natural scenery along many of Santa Clara County's highways should be protected from land uses and other activities which would diminish its aesthetic beauty.

C-PR 38
Land use should be controlled along scenic roads so as to relate to the location and functions of these roads and should be subject to design review and conditions to assure the scenic quality of the corridor.

C-PR 39
The visual integrity of the scenic gateways to the South County (Pacheco Pass, Hecker Pass, Route 101 south of Gilroy, and a Coyote greenbelt area north of Morgan Hill) should be protected.

C-PR 40
The Skyline Scenic Recreation Route should be completed in accordance with the recommendations of the four-county Joint Powers Committee, including development of a riding and hiking trail system along the route, and acquisition of a 100-foot right-of-way for the unpaved section of the route from Loma Prieta Road to Mount Madonna Park.

C-PR 41
Signs should be strictly regulated, with off-site signs and billboards prohibited along scenic routes.

C-PR 42
Access and commercial development along scenic expressways should be limited to prevent strip commercial development.

The State Scenic Highway Designation Process

Step 1: Placing a Nomination on the State Master Plan List

Establishing an officially-designated state scenic highway is a two part process. First, the state highway must be placed on the "California Master Plan of State Highways Eligible for Official Scenic Highway Designation" by the State Legislature. This is usually initiated by local action in cooperation with local members of the State Legislature.

State scenic highways are intended to be "complete highways":
- safe for rapidly moving traffic,
- designed to fit the landscape, and
- provided with appropriate vista points, turnouts, and rest facilities.

Land use is to be planned and controlled within an officially recognized scenic corridor. The "corridor" is simply the land area which can be seen from the road.

Step 2: Enacting Local Protections

In the second step, the local jurisdiction establishes the boundaries of the scenic highway corridor and prepares a local protection program. This protection program is subject to CalTrans review and approval. CalTrans then evaluates the adequacy of the local scenic highway protection program and makes a determination regarding official designation. The State Scenic Highway Designation Process

A road in the State Master Plan is officially designated as a scenic route only after it has been determined that the road and the right-of way meet the state's "scenic highway standards" and that the scenic corridor of the road has been given adequate protection for the preservation of its scenic resources.

Bringing the roads up to the scenic highway standards is the responsibility of the State; providing corridor protection is up to local governments.

For its part, the local jurisdiction must develop a plan and implementation program for the protection of the scenic corridor. State law requires that the locally-adopted "scenic highway protection program" include, at a minimum, the following:
- regulations governing land use and density of development;
- procedures for detailed land and site planning;
- controls over outdoor advertising, including prohibition of off-site signs;
- regulations governing earthmoving and landscaping; and
- procedures and regulations relating to the design and appearance of structures and equipment.

C-PR 43
New structures should be located where they will not have a negative impact on the scenic quality of the area, and in rural areas they should generally be set back at least 100 feet from scenic roads and highways to minimize their visual impact.

C-PR 44
Landscaping with drought-resistant native plants should be encouraged adjacent to scenic roads and highways.

C-PR 45
Activities along scenic highways that are of a substantially unsightly nature, such as equipment storage or maintenance, fuel tanks, refuse storage or processing and service yards, should be screened from view.

Implementation Recommendations

C-PR(i) 24
Apply appropriate land use and sign controls to lands adjacent to scenic highways to protect the visual integrity of the scenic corridor. (Implementors: County, cities)

Strategy #3: Develop Complementary Recreation Facilities

The enjoyment of scenic highways, particularly in rural areas, can be enhanced by the provision of public facilities that enable motorists to stop and rest, enjoy the views available from scenic vista points, and possibly even picnic in a scenic setting. These facilities can often be planned and developed in conjunction with public parks and open space lands adjacent to scenic roads.

Policies and Implementation

C-PR 46
County parks and other publicly owned open space lands along scenic routes should be designed to provide view sites, turnouts, rest stops, picnic grounds, and other facilities oriented toward users of the scenic roads.

C-PR 47
Further improvements to scenic roads should emphasize driving safety and parking for trailheads and rest stops, while minimizing alterations of the landscape.

C-PR 48
Litter collection facilities should be provided and maintained at turnouts and view sites along scenic routes.

C-PR 49
Hiking, bicycling, and horseback riding trails should be provided along scenic roads where they can be provided safely and without significant adverse environmental impacts. Bicycling facilities should be provided by edge marked shoulders and improved surfaces on paths.

C-PR 50
Scenic routes which are historic routes into or through the county should be so designated and historic sites and features along them identified and enhanced where appropriate.

Implementation Recommendations

C-PR(i) 25
Consider the development of recreation facilities to serve the needs of motorists on adjacent scenic roads when preparing master plans for individual parks and public open space lands. (Implementors: County, Midpeninsula Regional Open Space District, State Parks Department)

C-PR(i) 26
Include the development of facilities (such as rest stops, vista points, etc.) to serve the needs of motorists when preparing master plans for major widenings or realignments of existing state scenic highways and state highways in the Master Plan of State Highways Eligible for Official Scenic Highway Designation. (Implementors: CalTrans)

Current Status of Proposed State Scenic Highways in Santa Clara County

Categories of Existing and Proposed State Scenic Highways

Current Status of Proposed State Scenic Highways in Santa Clara County Existing and proposed state scenic highways in Santa Clara County may be grouped into three categories:

- state highways that have been officially designated as State Scenic Highways;
- state highways that have been included in the "California Master Plan of State Highways Eligible for Official Scenic Highway Designation", but have not yet been officially designated as state scenic highways; and
- state highways that are proposed by the County to become state scenic highways but have not yet been added to the California Master Plan of State Highways Eligible for Official Scenic Highway Designation" and thus are not yet eligible to be designated as state scenic highways.

Existing State Scenic Highways

Only two routes in Santa Clara County have been officially designated as State Scenic Routes:

1. Route 35, the Skyline Scenic Recreation Route, northern end

   Skyline Boulevard, State Route 35, is one of the most important scenic highways in the State system, and in past years received the greatest amount of attention among the scenic routes in Santa Clara County. Skyline Boulevard is part of a great scenic route which now follows the crest of the Santa Cruz Mountains from Highway 17 in Santa Clara County to San Francisco, and which could one day be extended to the south to connect with Hecker Pass Highway at Mount Madonna County Park.

   State corridor studies have been completed in the county from 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).

2. Route 9, Congress Springs Road and Los Gatos-Saratoga Road

   State Route 9 runs from Los Gatos to Saratoga, then turns into the Santa Cruz Mountains under the name of Congress Springs Road, and winds its way up to Skyline Boulevard. All of Route 9 is in the State Master Plan. All of Route 9 within Santa Clara County has been given recognition as a scenic road, as well as official designation as a State Scenic Route. A four-foot wide bicycle lane has been built along the uphill side of Congress Springs Road.

Highways on State Master Plan, But Not Yet Designated as State Scenic Highways

Five additional routes in Santa Clara County are now in the State's Master Plan, but have not been officially designated as State Scenic Routes:

1. Route 17, from Los Gatos to the Santa Cruz County Line

   Highway 17 is both a scenic route and a very heavily traveled portion of the State Highway system. Unlike Skyline or Route 9, Highway 17 does not offer the motorist a road for recreational driving. 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 with the recreational areas of the Santa Cruz County Coast. Official designation of the route awaits action by the State.

2. Route 152, the Pacheco Pass Highway

   This busy highway is one of the most dramatically scenic gateways into Santa Clara County. The County is currently actively seeking official State designation of this road as a state scenic highway.

3. Route 156, Hollister Road

   A short segment of Route 156 is within Santa Clara County. This scenic route runs from its intersection with Pacheco Pass Highway south into San Benito County and Hollister.

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4. 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 280 is one of the nation's most beautiful freeways, and clearly deserves the protection afforded by scenic designation. The design of Route 280 established a precedent for state freeways, particularly in introducing new concepts in bridge design and in sensitivity to the landscape.

5. Route 35, the 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 because local scenic highway protection programs have not been submitted for approval by Santa Cruz and Santa Clara Counties.

Routes Proposed to be Added to the State Master Plan

The State's Master Plan can only be changed by State legislative action. Four additional state routes in Santa Clara County that deserve attention by the State Legislature are:

1. Route 101, the 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. State scenic designation and land use protection by the County and the cities of Gilroy, Morgan Hill, and San Jose can help preserve the scenic character of this corridor as future development occurs.

2. Route 152, Hecker Pass Highway

   Hecker Pass Highway from Gilroy west to Mount Madonna Park and the Santa Cruz County line is an important scenic road connecting the County with the Watsonville area and Monterey Bay. The route is presently in the State Master Plan within Santa Cruz County.

3. Route 680-Route 280

   The southern half of San Francisco Bay is nearly ringed by state scenic routes. Route 280 is in the State Master Plan from the Bay Bridge in San Francisco to Highway 17/880 in San Jose. In the East Bay, Routes 24 and 680 form a link from Oakland to the Alameda-Santa Clara County line. All that remains to complete the route is the inclusion of the Santa Clara County portion of 280 from Highway 17/880 to Highway 101 and the inclusion of all of Route 680 from Highway 101 to Alameda County.

4. Route 17, from Los Gatos to Campbell

   The portion of Route 17 from Los Gatos to the point where the freeway crosses over Los Gatos Creek near Campbell Avenue parallels the Los Gatos Creek Trail and park chain. Completion of this park will greatly enhance the setting of Route 17. Scenic route designation by the state would further add to the efforts to beautify this portion of the county.

Resource Conservation

Countywide Issues and Policies

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- Background
- Overall Strategies H-3

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  - Strategy #2: Obtain Additional Sources of Imported Water
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  - Strategy #4: Maintain Drought Contingency and Groundwater Basin Management Plans

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(cont'd).

Resource Conservation

Countywide Issues and Policies

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Introduction

Summary

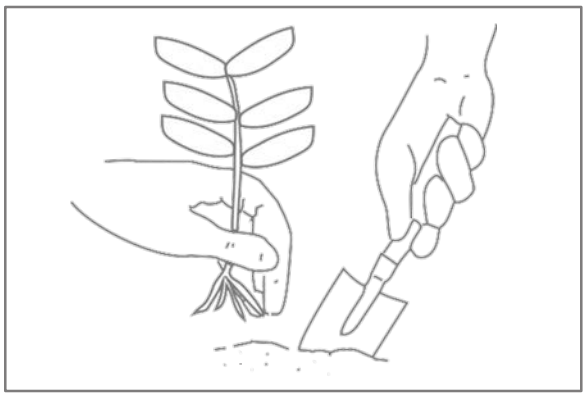
The types of natural and heritage resources with which Santa Clara County is blessed are quite numerous and diverse. This chapter of the General Plan addresses the following subjects:

1. Water Supply Resources
2. Water Quality & Watershed Management
3. Habitat & Biodiversity
4. Agriculture & Agricultural Resources
5. Mineral Resources
6. Heritage Resources
7. Scenic Resources

In addition, this chapter addresses two other major conservation-related subjects:

8. Solid Waste Management
9. Energy Resources

Although conservation and preservation are common themes to each of these major issues, the diversity of subjects addressed under Resource Conservation requires specific strategies and policies to be tailored to each type of resource. For certain sections, issues and strategies vary significantly from those raised in the Countywide Issues and Policies part of the Plan; in others, the issues and strategies vary primarily in emphases and policy elaboration.



As a general rule, the issue-specific strategies and policy directions found in each section of the chapter adhere to the following overall five-part strategy for resource conservation and management:

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: Evaluate the effectiveness of required mitigations

Background

NATURAL RESOURCE VALUES

Most of the types of resources discussed in this chapter have multiple values, not merely value as commodities. Primary examples are groundwater basins, a diversity of habitats, excellent agricultural soils and climate, and scenic resources, among others. Their significance includes:

- ecological value, the value inherent to natural processes regardless of any particular utility to humanity;
- functional value, the value or utility derived from a resource in addition to its ecological value, such as the direct value of groundwater aquifers to our water supply, or the indirect value of forests in regulating climatic conditions;
- economic value, the commodity value of various resources, such as crops from agricultural lands, timber, water, and mineral deposits, among others; and
- aesthetic and/or recreational value, the value we place on the visual or spiritual quality, beauty, and possible recreational use of our natural environment, all of which contributes greatly to our sense of place and the quality of life unique to this area or region as compared to others.

HERITAGE RESOURCES VALUES

These resources include historical sites and structures, heritage trees, and archeological and paleontological sites. Many of these resources also have multiple values:

- scientific value; the potential to increase our knowledge of the natural world;
- cultural/historical value, the potential to preserve the historical context from which our current culture and built environment has evolved, as well as to learn from past experience; and
- place value, the potential to give to our surroundings a true "sense of place" which defines us, contributes to our sense of wellbeing, and distinguishes Santa Clara County from other areas.

STEWARDSHIP PRINCIPLES FOR RESOURCE MANAGEMENT

As our understanding of the environmental impacts of industrialization and urbanization has improved, humanity has been evolving towards a view of nature and its resources which better balances the ecological, functional and economic values of natural resources. Perhaps the term which best describes this evolving view of our relationship with the natural world is "stewardship." The concept entails an awareness and dedication on the part of all concerned, including individuals, businesses, and communities to preserve and enhance the quality of the environment and its resources.

The stewardship concept embodies an ethic to maintain or enhance the quality and diversity of the natural environment for its intrinsic values and for the sake of future generations who depend upon it. Its most important aspects or components include:

- conserving non-renewable resources, and planning wisely for the use and replenishment of renewable resources;
- not overburdening the environment's capacity to absorb impacts of human activities or withstand pollution; and
- preserving natural diversity and those resources which should be the special heritage of each successive generation, such as historical and archeological resources.

The stewardship concept applies equally to the preservation of our heritage resources. Given the trend towards increasing homogenization of places and regions in America, our cultural heritage resources become far more important than mere curiosities from the past or landmarks by which to navigate the urban landscape. If these resources are integrated with new development rather than eliminated to make way for progress, heritage resources enrich and vitalize both urban and rural environments.

RESOURCE MANAGEMENT & CONSERVATION CHALLENGES

In very general terms, the challenges for the future can be stated as follows:

1. *Growing population and economic development place increasing demands upon our natural resource base.*

   Increasing populations, economies, and urbanization place greater demands upon the natural resources and heritage resources which sustain us. Demands increase for food and agricultural output, for commodity resources, and for land and development potential. Recreational needs also increase, as does demand for both rural and urban open space.

2. *The capacity of the environment to accommodate human impacts depends on how urban growth, economic development and physical development are managed.*

   Where development is located, how activities are regulated, how impacts are managed and the rapidity of changes that occur all affect the natural resource base. Some environments are less capable of withstanding impacts than others. The capacity to absorb pollution without ill effect is one example.

3. *Many aspects of resource protection and conservation are not practicable or effective solely on the local level, but local policies and regulations can play a significant role.*

   While not all types of resources can benefit solely from local actions and policies, many are directly affected by local activities and policies towards the environment. These resources, such as local stream environments, should be the subject of our most intense efforts on the local government level to implement stewardship principles, while acknowledging the necessity in other cases for more concerted efforts on the regional, state, national, and even international level. The need for improved energy conservation is one example.

Overall Strategies

For each of the nine sections within this chapter, there is a set of strategies tailored to each subject which together indicate the general approach taken to managing each resource. However, each of these strategies share some aspects in common. These commonalties can serve in an introductory way as an "overall strategy" for resource conservation on the local and regional levels which incorporates the major principles of stewardship outlined previously. Hence, the overall strategy provides a point of reference as well as general guidance to the strategies, policies, and implementation recommendations of this and other jurisdictions' general plans:

OVERALL RESOURCE MANAGEMENT STRATEGY

1. **Improve and update current knowledge of resources.**

   Improved knowledge and understanding of the resources in question is essential in order to better anticipate, prevent, or minimize adverse impacts of human activities, whether for discrete impacts or possible cumulative impacts.

2. **Emphasize pro-active, preventive measures.**

   Whether the subject is designating and protecting natural areas through growth management or conserving landfill capacity through source reduction and recycling, pro-active, preventive measures are generally more effective and cost-efficient than restoring ecosystems or building new landfills.

3. **Minimize or compensate for adverse human impacts.**

   In cases where adverse human impacts are unavoidable, there are often ways to minimize or compensate for those impacts. If the cumulative impact of various human activities may result in extensive, irreversible damage or harm, policy should be to err on the side of caution in order to provide a greater margin for error. Finally, if at all possible, identify thresholds beyond which discrete and cumulative impacts should not be allowed.

4. **Restore resources where possible.**

   Where appropriate, degraded environments should be restored to the maximum extent possible, whether the subject is wetlands, quarries, or landfills. These efforts should also be augmented by measures to restore "nature" and livability to our urban environments. Examples include flood control projects which maintain features and functions of natural flood plains, urban tree planting programs, and streetscaping.

5. **Evaluate the effectiveness of project mitigations, as required by CEQA.**

   Periodic monitoring of conditions should be considered an integral part of any overall strategy to protect and conserve resources, providing the feedback necessary to determine the effectiveness of particular programs, policies or other implementation efforts intended to mitigate impacts.

Resource conservation can enrich us in many ways, by preserving valuable commodities needed for the regional economy, by preserving the integrity of ecological systems and wildlife habitat, and by preserving the natural beauty of our surroundings. Whether future generations inherit an environment of integrity and sustainability, or merely a world of compounded environmental problems, will in part be deter-mined by the decisions and choices of the present.

GOVERNMENTAL ROLES IN MANAGING RESOURCES

The jointly adopted urban development policies of the cities and County of Santa Clara play a major part in the management of urban growth and development and in the conservation of resources on a countywide basis. These policies incorporate the concept that largely undeveloped areas not suitable or intended for urban development should not be included within cities' Urban Service Areas for potential urban expansion. Thus, the cities and the Local Agency Formation Commission (LAFCO) have significant roles to play in resource management efforts, through careful long range planning, by accommodating growth needs through compact and infill development, and by allowing expansion of the urbanized area only as necessary.

Correspondingly, one of the fundamental roles of the County of Santa Clara, in whose land use jurisdiction lies the large majority of remaining undeveloped lands, is to help manage and conserve the resources of local, countywide, and regional significance located within the rural, unincorporated area. This being a major emphasis of County land use and environmental policy, some topics addressed briefly in the Resource Conservation Chapter for Countywide Issues & Policies will be addressed in more detail in the Rural Unincorporated Area Issues & Policies section of the General Plan.

➔	***Policies and Implementation***

C-RC 1
Natural and heritage resources shall be protected and conserved for their ecological, functional, economic, aesthetic, and recreational values.

1. Open lands not suitable or intended for urbanization should not be included cities' long term urban growth plans. Protections necessary to preserve and manage resources should be provided.
2. Heritage resources shall be preserved to the maximum extent possible for their scientific, cultural, or place values, and they shall not be diminished due to inadequate safeguards.

C-RC 2
The County shall provide leadership in efforts to protect or restore valuable natural resources, such as wetlands, riparian areas, and woodlands, and others:

a. for County-owned lands; and
b. through multi-jurisdictional endeavors.

C-RC 3
Multiple uses of lands intended for open space and conservation shall be encouraged so long as the uses are consistent with the objectives of resource management, conservation, and preservation, particularly habitat areas.

C-RC 4
On a countywide basis, the overall strategy for resource management, conservation, and preservation should include the following:

a. improve and update current knowledge;
b. emphasize pro-active, preventive measures;
c. minimize or compensate for adverse human impacts;
d. restore resources where possible; and e. monitor the effectiveness of mitigations.

Implementation Recommendations

C-RC(i)1
Explore the use of joint agreements between the County, cities and LAFCO for the designation and protection of lands and resources of mutual interest and concern, where appropriate. Identify areas where County should exercise leadership.

Water Supply Resources

Background

GEOGRAPHY, CLIMATE AND GEOLOGY

■ Local Precipitation

Santa Clara County has a Mediterranean climate, characterized by extended periods of precipitation during winter months, and virtually none from spring through autumn. Annual average rainfall amounts vary significantly due to topography. Portions of the County in the Santa Cruz Mountains receive 40-60 inches per year, while the central Santa Clara Valley receives on average 13-14 inches in the vicinity of downtown San Jose. [see graphic of average rainfall amounts].

However, average figures can be somewhat misleading, because in addition to seasonal variation, droughts in California are not uncommon. For example, the average annual rainfall amount for San Jose of approximately 13 inches per year tends to obscure the fact that rainfall over the last 100 years or so has ranged from 6 to over 30 inches in any one year.

■ Recurrent Drought and Its Impacts

'Drought' is defined simply as any period of below-average precipitation. Rainfall statistics indicate that short-term droughts of 5-7 years have occurred many times just within the last hundred years. Tree-ring analyses furthermore indicate that 10-20 year periods of below-average precipitation have occurred at least three times since the mid-1500s. Whereas in other regions of the country drought is considered a temporary aberration in weather patterns, in much of California, drought should be considered a common, if not a predictable phenomenon, with a variety of implications for water supply planning.

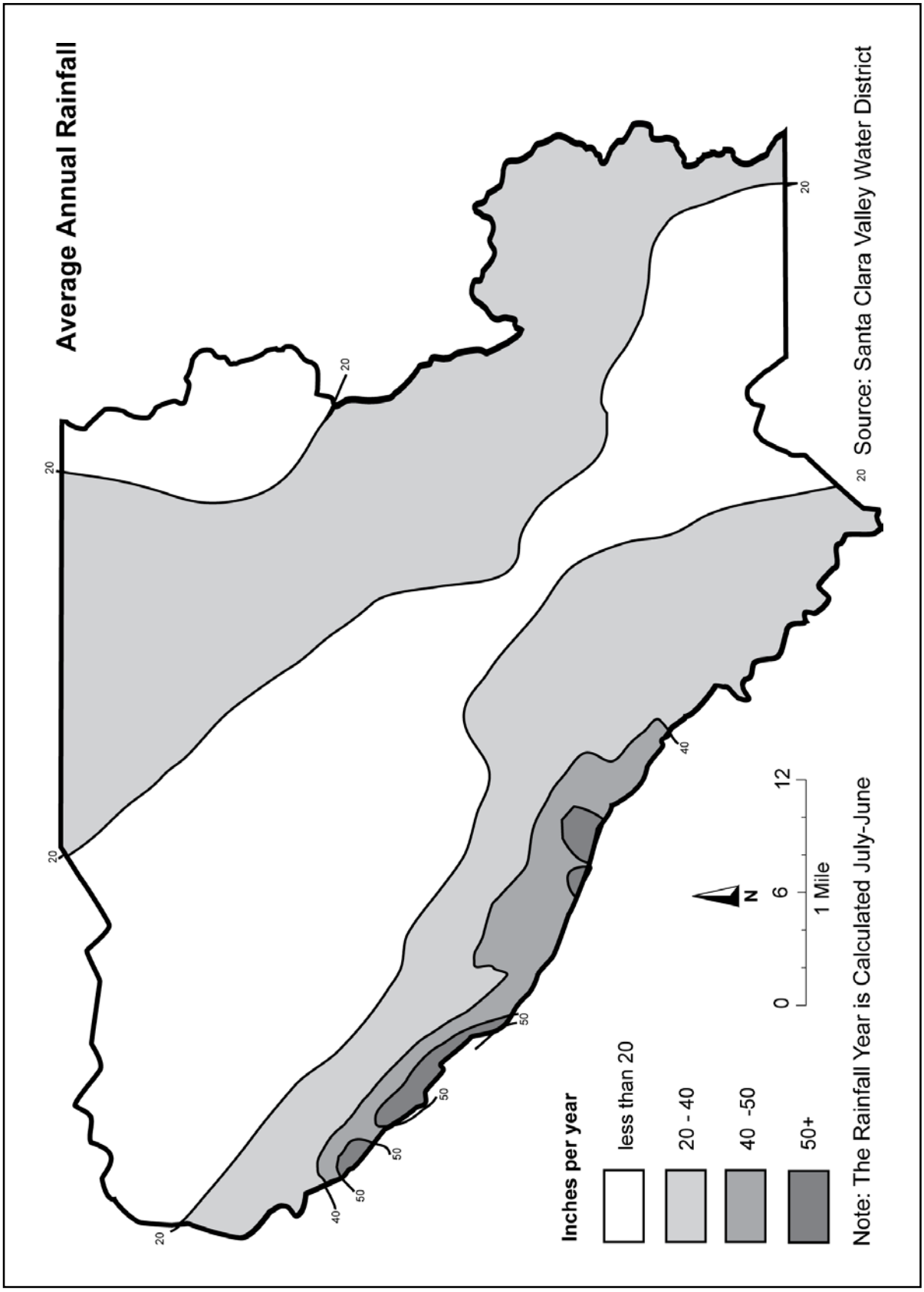
In the 1991-92 water year, much of the Bay Area and the state received normal or near normal precipitation amounts for the first time since 1986-87. In the 1992-93 water year, rainfall for Santa Clara County was also near or above normal, depending upon the location, officially concluding this most recent episode of shortterm drought. However, the severity of the drought has had a major, enduring impact upon residents of the area, the state, and its water supply system. For example, in Santa Clara County, mandatory conservation was required from 1989 to 1992 in order to reduce demand and avoid such shortages that could critically harm businesses and industries.

Generally speaking, the incidence of local and state drought of even short-term duration affects the overall water supply situation in several significant ways:

1. Water stored in local reservoirs that is necessary for groundwater recharge becomes depleted over time, and there is also less natural recharge to groundwater basins. Continued groundwater pumping without regard for these factors could re-initiate land surface subsidence.
2. Water retained in both surface and groundwater storage reservoirs as "carryover" supplies will become depleted.
3. Imported water supplies usually available to Santa Clara County are depleted and become less dependable.

■ Geologic Factors

The county is underlain by three major, interconnected groundwater sub-basins, the Santa Clara Valley, Coyote, and Llagas Sub-Basins. Aquifers (water-bearing strata) within these groundwater basins supply nearly half of the County's total water supply. Replenishment of groundwater basins occurs both naturally and through man-made efforts to augment natural processes. These percolation facilities are needed to increase the "recharge" of groundwater basins and balance the amount of water withdrawn. With groundwater overdraft, the clay layer soils in the underground basin can compress or consolidate and produce land surface subsidence.


Average Annual Rainfall
20
20
20
20
20
20
40
50
50
50
50
40
Inches per year
less than 20
20 - 40
40 -50
50+
0
6
12
1 Mile
N
Note: The Rainfall Year is Calculated July-June
Source: Santa Clara Valley Water District

In addition to the existence of substantial amounts of groundwater, mountainous terrain has afforded the potential for impoundments of surface water runoff, or reservoirs. These reservoirs are designed to capture runoff during winter rains for water conservation purposes; however, they also provide an incidental flood control benefit.

CURRENT SOURCES AND SUPPLIES

■ Role of the Santa Clara Valley Water District

The Santa Clara Valley Water District (SCVWD) was originally formed in 1951 as a Flood Control and Conservation District. In 1968, it became the multi-purpose agency known today with responsibilities for countywide water management, including flood control, conservation, and wholesale water supplier for most of the county's water retailing services. The overall mission of the SCVWD is to conduct a sound water management program that serves the community. Relative to water supply, the goal is to provide a supply of water adequate in both quantity and quality sufficient to meet community needs.

The SCVWD operates a complex system of reservoirs, canals, pipelines, groundwater basin recharge facilities, treatment plants and distribution pipelines serving approximately 1.5 million people. The water supplies needed to serve the urban area's population, businesses, and industries are obtained from both local and imported sources.

■ Local Sources

Local sources can contribute approximately 217,000 acre-feet per year, or about half of annual demand during the late 1980s. (An acre-foot is 325,000 cubic feet, enough water to fill an area of one acre to a depth of one foot). Water users obtain supplies from local sources by a variety of means, either from:

- the user's wells, pumping from groundwater basins recharged naturally or artificially by the SCVWD from water stored in surface reservoirs;
- water stored in SCVWD surface reservoirs and diverted to any of the three SCVWD treatment plants; or
- private reservoirs.

The threat of land subsidence is the principal constraint upon the amount of water that can be withdrawn from local groundwater basins. When more groundwater is withdrawn than restored through recharge, there is grave potential for land subsidence, which can cause damage to the foundations and structural integrity of buildings, to storm drainage systems, water and sewage pipes, flood control facilities, and other utilities. A related constraint is the annual amount of artificial recharge and the natural recharge capability of the groundwater basins.

■ Imported Sources

Imported water supplies are received by the SCVWD through long term contracts from the state and federal government. All water supplies received by Santa Clara County from the state and federal projects travel through the Sacramento/San Joaquin River Delta. Supplies to individual cities and the county are also obtained from the City and County of San Francisco (Hetch-Hetchy). The table below lists the origins and amounts of all imported and local water supplies.

As a result of a series of state-level hearings to ensure that sufficient flows are maintained through the Delta for managing environmental quality, urban water suppliers like the SCVWD will no longer be able to depend upon the state and federal water projects for the amount of water originally stated in contractual agreements.

These hearings, referred to as the Bay-Delta hearings, and the rulings that have resulted, were necessitated by the alleged long term degradation of the Delta water environment, resulting from many factors, including diversion of water to urban area suppliers and agriculture.

In essence, a decrease in supplies from the Central Valley and State Water Projects will increase the need to purchase additional sup plies, to promote conservation and reclamation,

and to build increased storage capacity. Because the amount of water which the County may receive from these projects will vary depending on annual precipitation in the watersheds that supply the Central Valley and State Water Project systems, drought contingency planning takes on far greater importance than it would appear only from the perspective of local rainfall conditions.

PROJECTED NEEDS

Since the 1960s, imported water has been used to augment locally developed supplies in order to meet the County's water needs. Population and economic development since the 1950s have made importation of water a necessity. In 1987, water use countywide approached 400,000 acrefeet, approximately half of which was imported. Latest projections by the SCVWD indicate that the water needed by 2020 may total 538,000 acre-feet per year.

The actual magnitude of supplemental water supply needed to overcome the deficiency in projected supplies for the year 2020 depends mostly on whether precipitation is normal or below normal over time. During a "Critical Dry Period" (CDP), such as the drought of 1986-91, projections indicate a maximum need for almost 170,000 acre-feet from new supply sources, an amount almost as great as the total obtained from all local sources. If rainfall over the period until 2020 is generally average, the shortfall is estimated at approximately 70,000 acre-feet.

CRITICAL LONG TERM SUPPLY ISSUES

Growth of the urban population and economy will continue to place demands upon natural resources of all kinds, but perhaps no other resource is more critical to the future of Santa Clara County and other urban counties in the state of California than water. All residents depend on an assured water supply for domestic uses, and business and industry must have dependable supplies of all raw materials, including water used in products and in processing, in order to plan for their future operations.

Given the recent experience of severe drought and decreased reliability of imported sources, several issues have emerged as critical to an assured long term supply of water:

1. *The need for continued conservation and public education to foster conservation and reclamation.* Conservation is an important component of the total supply picture; if water savings from conservation are not dependable, more of the total deficiency must be made up through purchases and other sources.

2. *State-wide resolution of Bay-Delta and water transfer issues.* Projected need for supplemental supplies faced by many major urban areas calls into question the thorny issue of statewide water allocation among agriculture, urban areas, and for environmental quality. Without adequate resolution of statewide allocation issues, whether by means of "market" solutions or otherwise, increased competition for water supply resources could strain the economy as a whole and disrupt local and regional supply capabilities.

3. *Local storage capacity planning.* Groundwater storage is finite, constrained by recharge capacity. If future surface storage capacity needs require additional reservoirs or expansion of existing reservoirs, such facilities can take a decade or more to plan and develop. Analysis, planning and development therefore must be done well in advance of need.

4. *Drought contingency planning and groundwater basin management.* As future episodes of drought appear, it will be necessary to have a dependable array of options from which to obtain supplemental supplies. In addition, the potential for overdrafting the groundwater basins poses much higher risk now that the extent and intensity of urbanization is substantially greater than when subsidence last occurred.

Note: See also "Water Quality & Watershed Management," and "Hazardous Waste & Materials Management, (Health & Safety Chapter)."

Strategies, Policies and Implementation

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: Conserve and Reclaim Water
Strategy #2: Obtain Additional Imported Water Sources
Strategy #3: Make system and Local Storage Capacity Improvements
Strategy #4: Maintain Drought Contingency and Groundwater Basin Management Plans

Policies and Implementation

C-RC 5
An adequate, high quality water supply for Santa Clara County should be considered essential to the needs of households, business and industry.

C-RC 6
A comprehensive strategy for meeting long term projected demand for water should at a minimum include the following:

a. Continued conservation and increased reclamation;
b. Securing additional sources as supplemental supply;
c. System and local storage capacity improvements; and
d. Drought contingency planning and groundwater basin management programs.

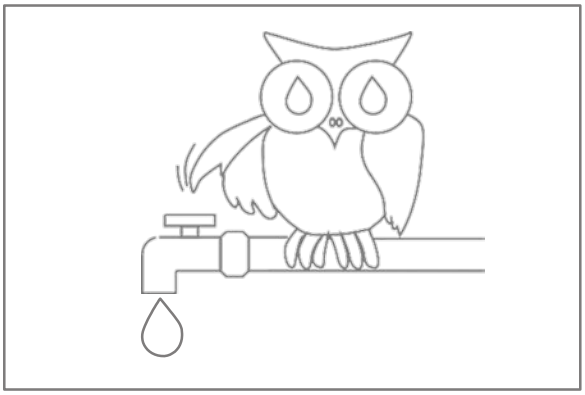
C-RC 7
Countywide land use and growth management planning should be coordinated with overall water supply planning by the SCVWD in order to maximize dependability of long term water supply resources.

C-RC 8
Environmental impacts of all state and local water supply planning and decision-making should be taken into full consideration.

Strategy #1: Conserve and Reclaim Water

Conservation and reclamation of treated wastewater both serve to make more efficient use of existing water supplies. Conservation is a readily available means of water savings for which there is significant potential. Whether in response to drought or as a prudent use of a scarce resource, conservation by homes and businesses should be considered an integral part of the County's ongoing supply strategy. However, savings greater than 25% can be difficult to achieve.

Reclaiming waste water for non-potable uses such as irrigation of landscaping also has great potential, but distribution costs may impose some limitations on the extent to which we can depend on reclamation in the near term to achieve water savings. One means of minimizing conveyance costs is demonstrated by the use of reclaimed industrial wastewater for landscape irrigation by nearby residential developments. Such special arrangements minimize water supply impacts of new development and benefit industries as well. Reclaimed wastewater may also be used to augment groundwater recharge if sufficiently treated for that purpose. However, neither conservation nor reclamation will be sufficient in and of themselves to meet the County's long term projected needs.



Policies and Implementation

C-RC 9
Conservation should continue to be considered an integral component of local water "supply" resources, effectively minimizing the amount of supplemental supplies which must be obtained from other sources.

C-RC 10
Educational measures should be continued/increased in order inform the public of the need for conservation over the long term, rather than as a temporary response to periodic drought.

C-RC 11
Domestic conservation should be encouraged throughout Santa Clara County by a variety of means, including reduced flow devices, drought-resistant landscaping, and elimination of wasteful practices.

C-RC 12
More efficient use of water for agricultural irrigation and industrial processes should be promoted through improved technology and practices.

C-RC 13
Use of reclaimed wastewater for landscaping and other uses, including groundwater recharge if adequately treated, should be encouraged and developed to the maximum extent possible.

Strategy #2:
Obtain Additional Sources of Imported Water

Additional sources of water supply may be obtained from several sources, including purchases or "transfers," exchanges, and desalinization. However, desalinization is currently the least cost-effective of the alternatives. Purchasing water on an expanded market may be necessary to meet long term needs. Reforms on a state-wide level will facilitate the purchase or "transfers" of supplemental water supplies.

Policies and Implementation

C-RC 14
Reforms of the state-wide system of water allocation and distribution should be encouraged which facilitate the ability of urban area water suppliers to purchase needed supplies through market mechanisms.

Strategy #3:
Make System and Local Storage Capacity Improvements

New reservoirs and expansions of existing reservoirs are possible, although not without environmental impacts and financial costs. Additional capacity may be necessary to accommodate water deliveries from new sources without affecting flood control management and other management functions of the SCVWD. Seismic safety requirements must also be taken into account. Older dams may require reinforcement as part of overall efforts to ensure the security of local supplies.

Policies and Implementation

C-RC 15
Potential for new and/or expanded local reservoirs should be thoroughly examined as a part of any long term strategy for assuring adequate water supply, taking into full account environmental and financial feasibility.

C-RC 16
Seismic safety considerations for new and existing reservoirs should be addressed in order to ensure water supply and public safety in the event of earthquake.

Strategy #4:
Maintain Drought Contingency and Groundwater Basin Management Plans

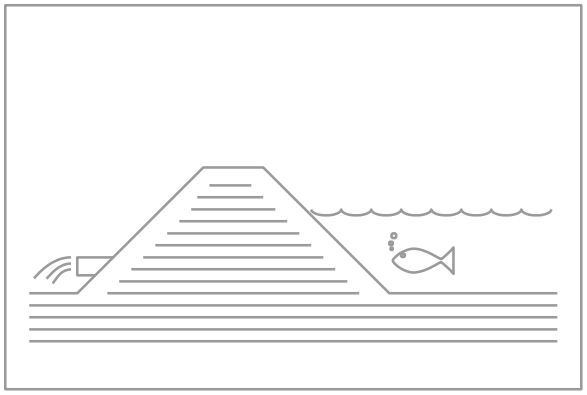
Finally, even if our future water supply can be assured by means of these strategies, periodic drought may require short-term modifications to the plan, affecting both supply sources and how the local system is managed to prevent overdrafting and subsidence. The lesson of the 1986-91 drought in the broadest terms is that drought contingency planning should be standard practice, not an ad hoc response to a crisis.

Policies and Implementation

C-RC 17
Drought contingency plans and groundwater basin management programs should be reviewed and updated to prepare for the likelihood of future periods of short-term drought and to minimize:

a. the potential adverse impacts of drought upon households, business, and industry, and
b. the possibility of groundwater overdraft and land subsidence.

[Note: For policies concerning water supply issues applicable specifically to rural areas, refer to the Rural Unincorporated Area Issues & Policies part of the General Plan].



Water Quality & Watershed Management

Background

SOURCES AND IMPACTS OF POLLUTION

■ Primary Pollution Sources

Countywide, there are many major sources of water pollution. Pollution that originates from a specific, discrete location, referred to as 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; and,
- illegal dumping activities.

There are also pollutants contained in urban stormwater runoff, referred to as "non-point" source pollution, due to the diffuse origins of such pollutants. These include metals, organic wastes, pesticides, and a variety of other pollutants (see following section). Other types of pollutants include those which result from disinfection of drinking water imported through the Sacramento/San Joaquin Delta, and the intrusion of salt water from the Bay into nearby groundwater aquifers.

■ Major Impacts of Water Pollution

Water pollution, of almost any kind, may have very serious impacts if it occurs in concentrations high enough to degrade or impair a water resource. In general, the kinds of resources to which water pollution poses the greatest threat are:

- water supply resources, such as groundwater basins and reservoirs;
- surface water environments, such as streams and riparian areas, wetlands, and receiving waters of S.F. and Monterey Bay; and
- the wildlife and people who come into direct contact with these surface water environments.

Because nearly half the County's water supply is drawn from groundwater basins, perhaps the area of greatest concern is the potential for direct contamination of those basins. The financial costs of cleaning contaminated groundwater basins, the direct loss of water supply due to well closures, and the possible cost to human health of a contaminated water supply can be truly significant. Santa Clara County is the most populous county in the Bay Area and provides nearly a third of all employment. Assurance of water quality for domestic and commercial users is essential.

Similarly, habitat areas of great ecological value are also quite vulnerable to degradation. Bay wetlands, marshes, and riparian corridors may take many years to recover once damaged. And the lower San Francisco Bay, into which flows the county's major surface drainage and treated wastewater, is the most vulnerable area of the Bay, due to its shallow depths and limited tidal flushing action.

COMPREHENSIVE WATER QUALITY MANAGEMENT

■ Regulatory Trends

Industrial and municipal wastewater discharges have long been the major focus of regulatory efforts to ensure water quality. These point sources continue to be extensively regulated by federal, state, regional, and local agencies under authority of the Clean Water Act and related legislation. However, as much as 50% of the

Industrial Groundwater Contamination

Although Santa Clara County's industrial development is not responsible for significant air pollution like the "smokestack" industries of the Northeast and Midwest, the area has not been immune from environmental problems. In the early 1980s, two separate incidents dramatized the potential for contamination of groundwater basins in Santa Clara County. Hazardous materials leaked from underground tanks at two industrial sites, both in southern San Jose, for an undetermined period of time before being discovered.

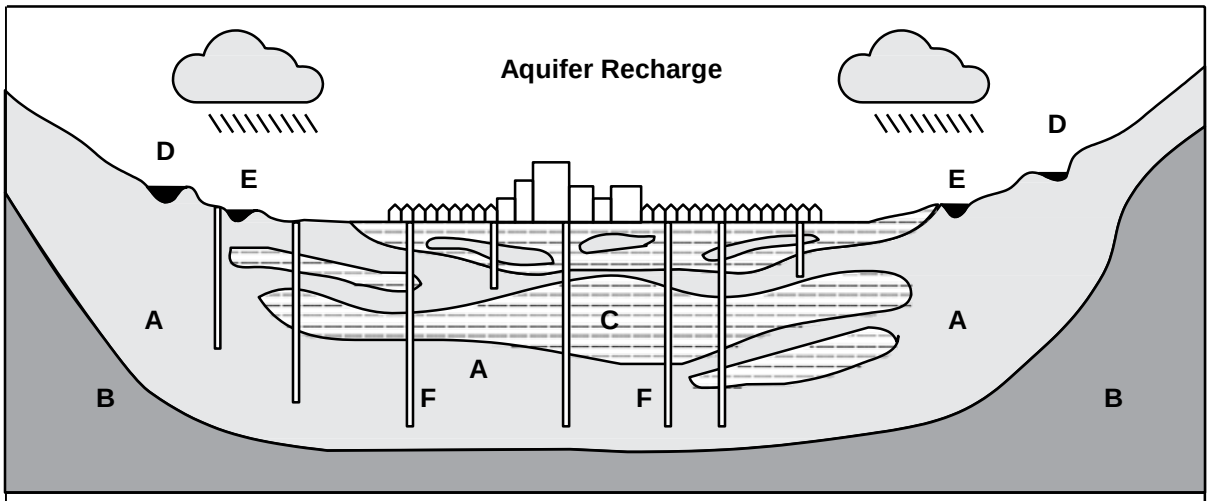
Prompt efforts by industry and regulatory agencies to control the damage to groundwater were put in place; however, the volatile organic compounds released into the ground leached down through several layers of aquifers, and in the one case, spread offsite for several miles before being contained by natural features of the area's subsurface geology. The S.F. Regional Water Quality Control Board continues to monitor the clean up efforts for these sites as the programs enter final stages.

Both incidents illustrated the vulnerability of metropolitan area water supplies to groundwater contamination, because the "plumes" of contaminants were able to spread easily through the relatively coarse soils underlying the North valley towards the deep aquifers nearest the Bay. A significant proportion of the county's water supply is directly drawn from these deep "fore-Bay" aquifers to serve the northern cities.

In summary, as of the early 1990s, there were in Santa Clara County approximately:

- 28 Superfund sites, the highest number of any region in the country;
- 50 contaminated public wells;
- 150 sites of soil and/or groundwater contamination; and
- 1000 motor fuel tank leak sites.

Groundwater contamination sites continue to be found and treated to the present. If they meet criteria, sites may be added to the federal Superfund cleanup list. Locally more than 1400 single-walled storage tanks used to contain hazardous chemicals have been removed or replaced with double-walled and above ground containers since adoption of the local Hazardous Material Storage Ordinance (HMSO) in 1987. Effective cooperation between the private sector and governmental agencies has been highly instrumental in the success of this program. These and other efforts to safeguard groundwater quality must continue as new evidence of contamination becomes known.



A	Aquifer	C	Clay	E	Percolation Ponds
B	Bedrock	D	Creeks	F	Wells

As rain falls to the ground, some of it seeps into the earth. The earth, made of many soil types such as clay, sand, and rocks, acts as a natural filter to purify this groundwater. The area under the earth's surface that filters and holds the groundwater is called an aquifer. Underground aquifers are an important source of water for this county.

In order to assure an adequate supply of water now and in the future, these aquifers are recharged using a combination of natural and manmade systems. Manmade creeks, whose bottoms are sand and gravel, allow water to seep into the aquifer below. In addition, some creek water is diverted into percolation ponds, which are also lined with sand and gravel to allow further aquifer recharge.

Clay, found beneath much of the built area of Santa Clara County, does not allow water or other fluids to percolate through it easily. Thus, it acts as a natural barrier to contamination of the goundwater supply. Bedrock does not allow water to pass through it at all, and thus holds water within the aquifer for us to tap.

pollution discharged into the S.F. Bay—pollution which may also significantly affect other water resources—is borne by stormwater runoff from a variety of diffuse sources from throughout the drainage area, or watershed.

This "non-point" source pollution has recently become the focus of increased legislation and regulation by the federal and state government. Local programs to manage non-point source pollution have just recently been instituted. This issue, along with the management of hazardous wastes and materials (addressed in the Health & Safety chapter), and watershed management programs (addressed in the Rural Unincorporated Area portion of the General Plan) will receive increasing emphasis in the future, providing a more comprehensive approach to water quality management than in the past.

■ San Francisco Estuary Project: An Example of Comprehensive, Multi-Jurisdictional Planning

Perhaps the most prominent of any recent programs to have incorporated a comprehensive approach to water quality problems has been the San Francisco Estuary Project. The Estuary Project represents a major planning and governmental coordination effort to reverse the long standing, cumulative environmental damage to the Bay from a variety of pollution sources and activities, including dredging

operations, municipal wastewater discharge and non-point source pollution, among others.

Planning efforts such as the Estuary Project combine into a coherent whole the many different aspects of water quality management needed to effectively address the diversity of problems affecting the quality of the S.F. Bay. It furthermore demonstrates the increasing need for intergovernmental cooperation at the local, state, and federal levels to implement the recommendations of the plan.

Of the many major recommendations to all jurisdictions in the Bay Area included in the Estuary Project plan, those most pertinent to Santa Clara County include the need for:

- comprehensive watershed management planning,
- wetlands and riparian restoration, and
- nonpoint source pollution controls. (see also Strategies)

■ Nonpoint Source Pollution Control

In both the urban and non-urban areas of Santa Clara County, substances are deposited on the surface of the land which are carried into the area's drainage system by stormwater runoff. However, given the much more extensive amount of impervious surface area within the urbanized areas, non-point source pollution is primarily an urban area pollution problem. Although it is much less obvious source of pollution, it accounts for nearly half of all the pollution which collects in the lower S.F. Bay.

Common pollutants contained in urban storm-water runoff generally include:

- tire material that adheres to road surfaces;
- metals such as chromium, lead, cadmium and other toxics produced by combustion, leakages, metal plating, and weathered paint;
- motor fuels, lubricants and other fluids which are inadvertently spilled or leak from vehicles, or which are purposefully dumped onto the ground or into the drainage system;
- pesticides, herbicides, and fertilizers applied to agricultural crops, landscaping, and roadsides;
- biological contaminants from litter, organic matter, and animal wastes; and
- detergents and solvents used to clean airplanes, vehicles, and other products.

Some of these pollutants are introduced to the drainage system by individuals who are uninformed of their effects on the environment. One of the most notorious examples is that of individuals who dump used motor oil into storm drains or onto the ground. Few are aware that one quart of used motor oil is capable of contaminating 250,000 gallons of water, much less that substances disposed of into the stormwater drainage system are not treated before entering the Bay. Others substances are introduced as the result of intentional efforts to avoid the costs of legal disposal and conformance with water quality regulations. The "Illegal Dumping Elimination Program" is one component of the overall Nonpoint Source Pollution Control Program intended to help reduce such activities.

The variety of sources and concentrations of pollutants, as well as the variability of runoff, make the "end-of-pipe" treatment methods, which are often used to address industrial discharges, impractical and ineffective alternatives for non-point source pollution control. Although not without its own difficulties, the most effective means of reducing non-point source pollution are those which prevent pollutants from being introduced into, or prevent their conveyance through, the storm drainage system to receiving waters.

■ Comprehensive Watershed Management Planning

Increasingly, the governmental entities responsible for water supply will rely upon comprehensive watershed management planning in order to ensure that the quality of the waters entering local reservoirs are of the highest quality standards. These plans involve the cooperation and coordination of many jurisdictions having land use authority and regulatory powers within the watershed, or

Santa Clara Valley Nonpoint Source Pollution Control Program: Origins, Mandate, and Elements

For some time, federal, state, and local agencies have been concerned about the vulnerability of water resources to pollution contained in urban stormwater runoff. This "nonpoint" source pollution is now coming under greater scrutiny by local governments which must implement state and federal regulations. The 1987 Water Quality Act requires municipalities of 100,000 or more to obtain a National Pollution Discharge Elimination System (NPDES) Permit to control stormwater discharges into receiving waters. In response to this mandate, the state Water Resources Board identified water bodies impaired by such pollution, including the lower San Francisco Bay below Dumbarton Bridge.

Santa Clara County, together with the Santa Clara Valley Water District and the thirteen cities which discharge stormwater into the S.F. Bay have in turn formed the Santa Clara Valley Nonpoint Source Pollution Control Program (Program). In June 1990, the Program obtained an NPDES permit from the Regional Water Quality Control Board for a five-year period. The permit defines the responsibilities of participants to control nonpoint source pollution, including the adoption and enforcement of local ordinances, control measures, monitoring and inspection programs required for that purpose. Failure to address these permit requirements in a timely manner may subject the participating jurisdictions to substantial criminal, civil and administrative penalties under state and federal law.

The Stormwater Management Plan, adopted to implement the permit requirements, contains seven elements which address:

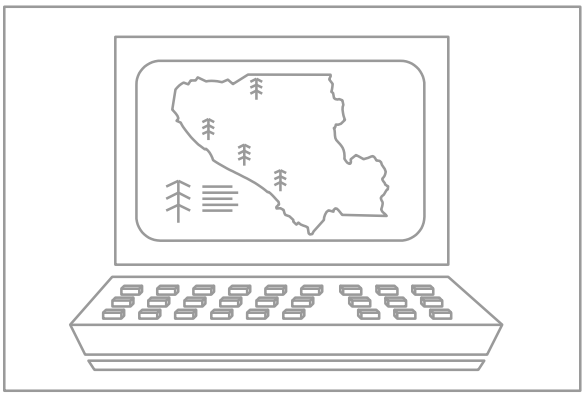
1. Existing Control Measures
2. Municipal Facility Operations and Maintenance
3. Stormwater Treatment
4. Elimination of Illicit Connection and Illegal Dumping Activities
5. Planning and Regulation of New Development
6. Regulator
7. Controls for Improper Waste Disposal 7. Public Information and Participation

Funding for the program's implementation and development will be obtained from a proposed fee on residential, commercial and industrial parcels; however, the Program itself will not require additional permits for particular land uses, businesses or industries. (Certain industries will be required to obtain stormwater disposal permits from federal agencies, but not in fulfillment of the Santa Clara Valley's NPDES permit).

The success of the Program depends not only upon vigorous implementation of the various program elements, but also upon increased awareness by all citizens who live and work in Santa Clara County. In the future, similar programs and permits will apply to the areas of the County which discharge stormwater runoff south to the Pajaro River, which empties into the Monterey Bay.

drainage area. Subjects of major concern include retention of ground cover and vegetation, timber harvesting, development impacts, land use, grading and earth moving, grazing practices, and other activities which affect surface runoff, primarily in the rural areas of the County.

[Refer to Rural Unincorporated Area Issues and Policies for more detailed information and policies.]



Strategies, Policies and Implementation

Countywide, a comprehensive approach to managing water quality should include the following basic strategies, in addition to ongoing point source regulation:

Strategy #1: Reduce Non-Point Source Pollution
Strategy #2: Restore Wetlands, Riparian Areas, and Other Habitats that Improve Bay Water Quality
Strategy #3: Prepare and Implement Comprehensive Watershed Management Plans

The overall strategy reflects the need for a comprehensive approach to safeguard water supply resources, improve the quality of water environments, and protect the health of species dependent upon them, as well as the health of humans who come in contact with those water environments. Its elements are consistent with the recommendations of the San Francisco Estuary Project as they pertain most directly to Santa Clara County, and they reinforce the need for improved consistency and coordination of efforts by all jurisdictions and agencies involved.

Comprehensiveness is also advantageous for two other important reasons. First, pollutants originating from various sources throughout the drainage area have the potential to impair the quality of groundwater as well as of surface water environments. Secondly, the web of natural processes and systems which serve directly or indirectly to maintain water quality is complex and interrelated. Surface water runoff is slowed by vegetation, reducing erosion and sedimentation in streams, percolation ponds and reservoirs. Vegetation also filters pollutants, such as in wetland areas, and riparian vegetation preserves streambanks. Percolation itself purifies water as it filters through layers of porous earth. A comprehensive approach will better ensure that all parts of water quality "picture" receive the necessary attention and protections.

➔ *Policies and Implementation*

C-RC 18
Water quality countywide should be maintained and improved where necessary to ensure the safety of water supply resources for the population and the preservation of important water environments and habitat areas.

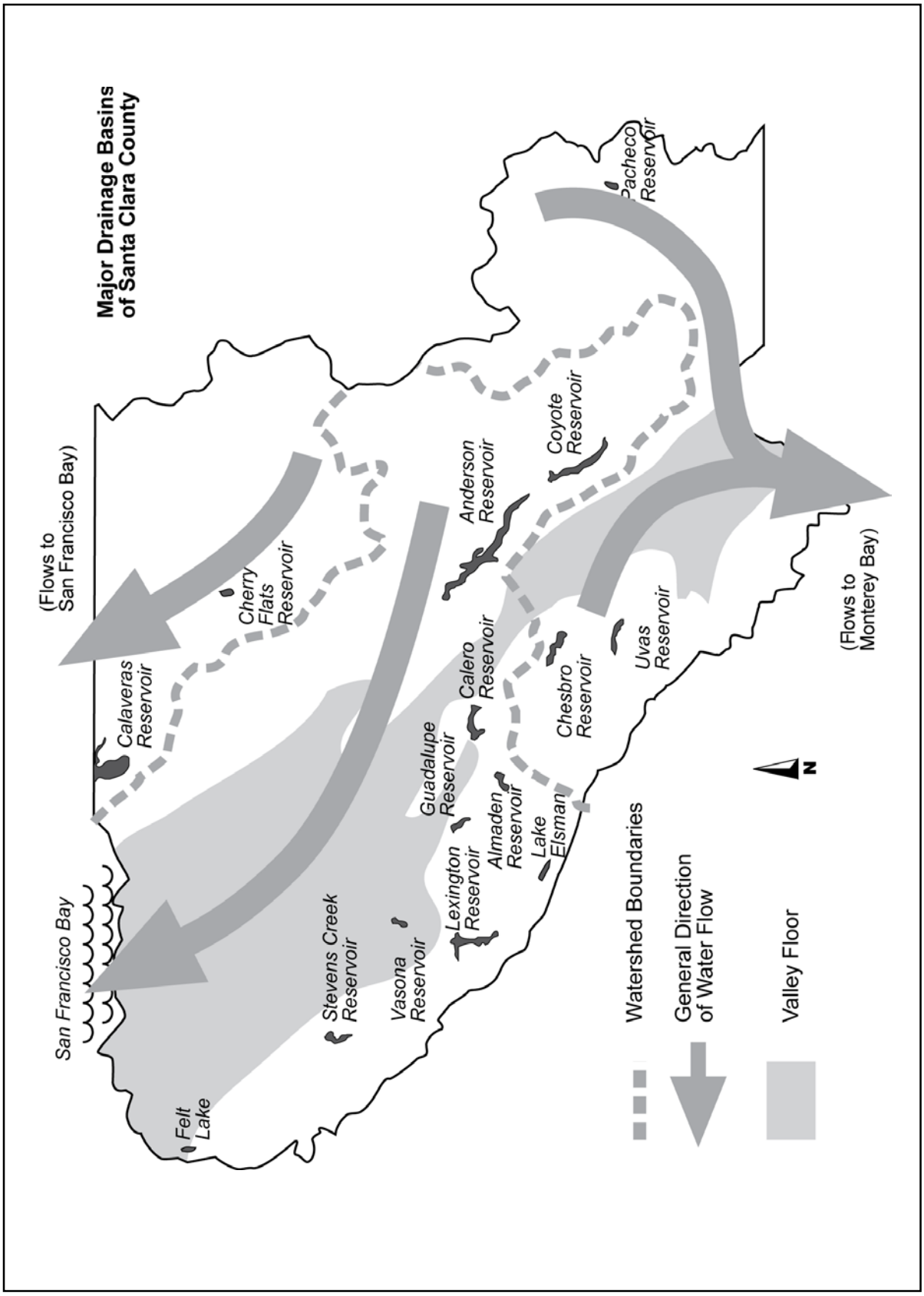
C-RC 19
The strategies for maintaining and improving water quality on a countywide basis, in addition to ongoing point source regulation, should include:

a. effective non-point source pollution control;
b. restoration of wetlands, riparian areas, and other habitats which serve to improve Bay water quality; and
c. comprehensive Watershed Management Plans and "best management practices" (BMPs).

C-RC 20
Adequate safeguards for water resources and habitats should be developed and enforced to avoid or minimize water pollution of various kinds, including:

a. erosion and sedimentation;
b. organic matter and wastes;
c. pesticides and herbicides;
d. effluent from inadequately functioning septic systems;
e. effluent from municipal wastewater treatment plants;
f. chemicals used in industrial and commercial activities and processes;
g. industrial wastewater discharges;
h. hazardous wastes; and
i. non-point source pollution.

C-RC 21
Multi-jurisdictional, countywide programs and regulatory efforts to address water pollution problems should have the full support and participation of each jurisdiction within Santa Clara County, including cities, special districts, state and federal agencies, and County government.


Major Drainage Basins of Santa Clara County
(Flows to San Francisco Bay)
(Flows to Monterey Bay)
San Francisco Bay
Felt Lake
Calaveras Reservoir
Cherry Flats Reservoir
Stevens Creek Reservoir
Vasona Reservoir
Lexington Reservoir
Guadalupe Reservoir
Almaden Reservoir
Lake Elsman
Calero Reservoir
Anderson Reservoir
Chesbro Reservoir
Coyote Reservoir
Uvas Reservoir
Pacheco Reservoir
N
Watershed Boundaries
General Direction of Water Flow
Valley Floor

Strategy #1: Reduce Non-Point Source Pollution

Without nonpoint source pollution controls, the water quality of San Francisco Bay will remain below desirable standards, because nearly half of all contaminants discharged into the Bay are introduced by urban stormwater runoff. However, programs and methods of preventing contaminants from being introduced into the environment at their source will require extensive public education and cooperation, as well as additional regulation and enforcement by local governments to carry out federal mandates.

Policies and Implementation

C-RC 22
Countywide, compliance should be achieved with the requirements of the National Pollution Discharge Elimination System (NPDES) permit for discharges into S.F. Bay, and to that end, the Countywide Nonpoint Source Pollution Control Program should receive the full support and participation of each member jurisdiction.

C-RC 23
The countywide Stormwater Management Plan should be routinely reviewed and updated as additional information is collected on the effectiveness of prescribed control measures.

C-RC 24
Efforts to increase public awareness and education concerning nonpoint source pollution control should be encouraged.

Implementation Recommendations

C-RC(i) 2
Continued support and funding for the countywide Nonpoint Source Pollution Control Program.

C-RC(i) 3
Determine how the county can best adapt and implement "best management practices" (BMPs) that have proven feasible and successful in other areas.

C-RC(i) 4
Educational programs and publications as developed by local governments, community organizations, businesses, and the educational system.

C-RC(i) 5
Expand availability of curbside pickup and disposal of waste motor oil and other materials.

Strategy #2: Restore Wetlands, Riparian Areas, and Other Habitats That Improve Bay Water Quality

Various jurisdictions have explored the options of using the natural cleansing actions of tidal wetlands as a substitute for aspects of costly municipal wastewater treatment facilities to accomplish some of the types of processes required before effluent may be discharged into receiving waters. The city of Arcata on California's northern coast has restored large areas of wetlands for that purpose with great success, while at the same time augmenting critical wildlife habitat and passive recreational opportunities for the community. Wherever it is feasible to combine such mutually-reinforcing objectives, these options should be explored for further use in the San Francisco Bay estuary.

Policies and Implementation

C-RC 25
Wetlands restoration for the purpose of enhancing municipal wastewater treatment processes, improving habitat and passive recreational opportunities should be encouraged and developed where cost-effective and practical.

Implementation Recommendations

C-RC(i) 6
Create a task force to explore potential implementation and cost-effectiveness of wetlands restoration for water treatment processes (Implementors: Cites, County, Estuary Project, San Francisco RWQCB).

C-RC(i) 7
Explore existing pilot studies and demonstration programs utilizing wetlands restoration for aspects of municipal wastewater treatment.

➡	***Strategy #3: Prepare and Implement Comprehensive Watershed Management Plans***

Agencies and districts responsible for the quality of water supply resources located in Santa Clara County are focusing increased attention on more comprehensive watershed management planning. These include the Santa Clara Valley Water District (SCVWD) and the City of San Francisco's Public Works Department, which owns Calaveras Reservoir and adjacent lands near Milpitas and the Alameda County boundary. The primary goal of such planning is greater assurance of water quality, while also balancing other public policy objectives, such as habitat protection, public safety, and recreational needs.

Developing and implementing such plans will ultimately involve a variety of jurisdictions and governmental agencies which have authority over the use of lands within the watersheds that directly drain into surface reservoirs. Efforts to develop such plans are in the initial stages, and as these develop, greater involvement of County government in particular will enhance the effectiveness of their implementation. [Note: Refer to the Rural Unincorporated Area Issues and Policies section of this General Plan for further elaboration].

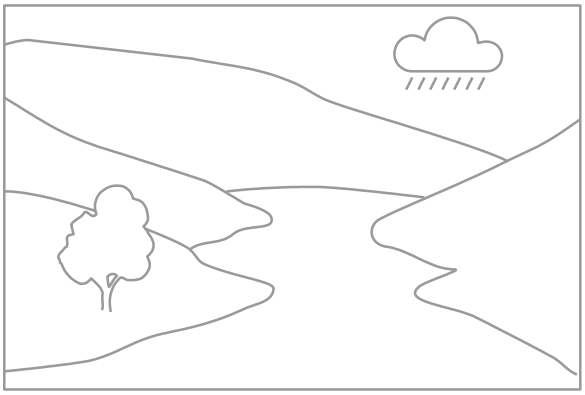
➔	***Policies and Implementation***

C-RC 26
Comprehensive watershed management plans should be developed and implemented through intergovernmental coordination. Water supply watersheds should receive special consideration and additional protection.

Implementation Recommendations

C-RC(i) 8
Encourage task force participation by appropriate agencies, districts, and jurisdictions to scope and develop management plan. (Lead agencies: SCVWD and City of San Francisco Public Works)

[Note: for more detailed policies and implementation recommendations concerning water quality and watershed management applicable specifically to rural areas, refer to the Rural Unincorporated Area Issues & Policies part of the General Plan].



Habitat & Biodiversity

Background

HABITAT TYPES, SIGNIFICANCE, AND TRENDS

■ Major Types and Importance of Habitats

Santa Clara County contains many distinct types of habitat, supporting a variety of plant and animal species, some of which are threatened or endangered by extinction. Predominant among the county's major habitat types are the following, and within each of these major classifications are many more sub-types, each supporting a particular mix of interdependent species:

- the various Bay wetland habitats,
- freshwater streams, or "riparian" areas,
- grassland/savanna habitats and
- chaparral, mixed woodland, and evergreen forest areas.

Some habitat types are more rich in the diversity of species they support than others. In California and the western U.S. as a whole, riparian areas more so than perhaps any other type of habitat contain the greatest diversity of species, providing not only a critical water supply to many species, but greater density of vegetation for adequate cover, protection, and food sources. Riparian areas are indeed a "mother lode" of species diversity, to borrow a phrase.

Habitats such as riparian areas perform many other important functions, as well. Prominent among these other benefits is soil retention. Vegetation reduces soil erosion and minimizes the related adverse impacts of erosion. If soil erosion is excessive, the regenerative capability of a habitat is impaired. For an area such as Santa Clara County, where steep slopes, landslide potential, and other related geologic hazards are prevalent, erosion control is even more important.

Riparian systems also function to:

- preserve water quality by filtering pollutants from runoff before it enters surface waters;
- minimize sediment buildup in reservoirs;
- preserve stream banks from collapse;
- reduce flows and store flood waters; and
- provide aesthetic and recreational enjoyment.

Therefore, habitat conservation is of critical importance not only for ecological reasons, but also for the role it plays in such matters as protecting water supply resources and investments for urban populations.

■ The Emerging Emphasis on Biodiversity Preservation

"Biodiversity" is a term used to describe the full diversity of earth's plant and animal species. It encompasses the diversity of regions and ecosystems, of individual species, and even of genetic diversity and potential. Preserving habitat and biodiversity is important for many reasons, some being of fundamental importance to our own survival:

- it is integral to maintenance of basic processes such as oxygen-carbon dioxide exchange, oceanic currents, and hydrologic cycles;
- all species are dependent upon genetic diversity in order to adapt to changing conditions and survive;
- science does not know enough about the tremendous variety of species that exist, which ones are being lost, or their significance, in order to understand predict the cumulative impacts of increasing rates of extinction; as well as
- understanding of the medicinal values of many plant species is steadily increasing.

Adaptation, extinction, and emergence of new life forms are integral aspects of nature and evolution. However, over the last few decades, plant and animal extinctions have been increasing at an accelerating rate, due mostly to the cumulative impacts of human activities upon habitats. Attention has focused largely on such areas as equatorial rainforests, but habitat

loss of varying scales is of concern everywhere there are human impacts on habitat (see endnotes).

Attempts to prevent extinction to date have primarily focused on saving individual species most imminently "threatened" or "endangered" with extinction (see sidebar on Endangered Species Act). However, in light of the rising rate of extinctions and the limitations of species- by-species approaches, what is needed is an approach that will not only improve the chances of survival for species already in trouble, but one which will also help prevent other species from becoming endangered.

The emerging emphasis on preserving biodiversity attempts to do just that, by focusing upon conservation of habitat areas and functioning ecosystems. Ultimately, this more encompassing strategy should prove more successful overall and more cost-effective than species-byspecies rescue and recovery attempts.

In California, it is estimated there are over 270 distinct habitat types. However, some are more protected than others. 95% of all alpine habitats, for example, are deemed secure due to their remote locations; whereas, only 1% at most of the state's richest habitat type, riparian areas, are adequately protected. A major implication for local governments and agencies is the need to develop more effective strategies, policies and protection measures for the resources within their jurisdictions.

MEETING THE CHALLENGES TO PRESERVING HABITAT AND BIODIVERSITY

■ Major Threats and Challenges

The major threats to habitat and biodiversity in Santa Clara County and the region are the result of both natural and human causes, including:

- degradation of habitat quality or "integrity," from natural factors, such as drought, or from human activity;
- wholesale loss due to urbanization or development activities, and in some cases due to natural causes; and
- fragmentation of habitat areas.

"Threatened and Endangered Species in Santa Clara County, 1992"

Animal Species:	Status
American Peregrine falcon	Endangered (US & CA)
Southern Bald Eagle	Endangered (US & CA)
Californian black rail (bird)	Threatened (CA)
California brown pelican	Endangered (US & CA)
California clapper rail (bird)	Endangered (US & CA)
Bank swallow	Threatened (CA)
California least tern	Endangered (US & CA)
Least Bell's vireo (bird)	Endangered (US & CA)
Bay checkerspot butterfly	Threatened (US)
Salt marsh harvest mouse	Endangered (US & CA)
San Joaquin kit fox	Endangered (US) Threatened CA

Plant Species:	Status
Coyote ceanothus	Proposed Endangered (US)
S.C. Valley dudleya	Proposed Endangered (US)
Hoover's button celery	Proposed Endangered (US)
Marin dwarf flax Proposed	Threatened (US)
Metcalf Cyn. jewelflower	Proposed Endangered (US)

Other factors of lesser impact include:

- the particular vulnerability of some species to various impacts compared to the adaptability of others; and
- introduction of unnaturally occurring, or "exotic" species which upsets the balance of nature.

Strategies at the State and Regional Level

On the national, state and regional level, the most pragmatic approach to protecting habitat and biodiversity involves preserving the largest possible areas of habitat and intact natural communities. Secondly, there is a need to provide increased protection to the types of habitat which are either under-represented or not currently found within parks and preserves. To this and related ends, various California agencies involved with habitat and endangered species have adopted "The Agreement on Biological Diversity," an official memorandum of understanding (MOU) between these agencies and departments which establishes preservation of biodiversity as a "preeminent goal in their protection and management policies."

One example of multi-jurisdictional efforts to achieve biodiversity preservation on a regional scale is the state's Natural Communities Conservation Planning program (NCCPP), which initially focused upon preserving natural areas of coastal sage scrub in portions of San Diego, Orange, Riverside, Los Angeles, and San Bernadino counties. The planning area involved covers approximately 6,000 acres, and the goal of the program for this area is twofold, (1) to preserve native habitat for many threatened and endangered species indigenous to the region through the designation of multi-species reserves, and (2) not to preclude compatible and appropriate land use and development.

Although still under development, the program is gaining national recognition for involving numerous regulatory and land management jurisdictions (State, Federal, and local), as well as conservation groups and private landowners to develop a coherent program of conservation planning from what otherwise would have been a highly fragmented, divisive situation. A number of other similar regional endeavors are also under development around the state of California.

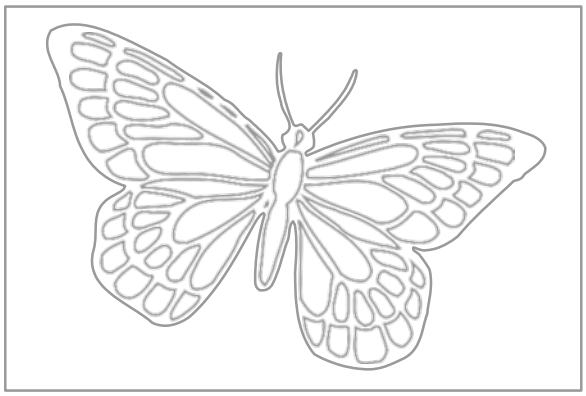
Finally, federal, state, and regional government agencies are requiring more than ever before that local governments and departments participate in rigorously enforcing laws and regulations to preserve habitat. These requirements will likely increase over time rather than diminish, as efforts are increased at the state and federal level, also.

[See Sidebar: Endangered Species Acts and Local Implementation]

The Future of Habitat Management in Santa Clara County

In Santa Clara County, habitat types and species which are most threatened include riparian areas, oak and grassland savannas, and baylands, to mention a few. Serpentine soils and associated habitat also figure prominently in local and regional preservation efforts. These habitats are the bases of survival for most of the species of plants and animals now listed or proposed for listing as threatened or endangered with extinction in Santa Clara County.

Many more species will be listed or proposed for listing during 1993 and 1994 as a result of judicial rulings. At least four more plant species are among those identified for listing in Santa Clara County. All four depend upon serpentine soils. [For more complete inventories, refer to the Rural Unincorporated Area Issues & Policies portion of the General Plan, or to the EIR].



Many of these species are found in locations designated by the state as "Significant Natural Areas," (SNAs) areas characterized by the existence of extremely rare species, groups or ensembles of species, high diversity of species, or which represent the best known example of a type of natural community. Twenty-eight (28) SNAs are currently identified by the California Dept. of Fish and Game (CDFG) within Santa Clara County, but not all of the County, much less the state, has been studied.

As more information is compiled from sources such as the Native Plant Society, environmental assessments of proposed development, and other sources, the inventory of SNAs will be updated by the state. [Refer to the Rural Unincorporated Area Issues & Policies portion of the General Plan for the full list of SNAs].

Efforts to conserve habitat on a countywide (sub-regional) and regional basis cannot necessarily cope with all types of threats and challenges, much less address the entire scale of biodiversity, including ecologies, species and genetic diversity. Nonetheless, localities will benefit from a systematic, unified approach that consists of several key strategies, outlined below.

Endangered Species Act and Local Implementation

The Federal Endangered Species Act was passed in 1973 and has since been amended and reauthorized at various times. Its primary purposes are to conserve ecosystems on which endangered species depend and to provide a program for the conservation of each such endangered or threatened species. The California Endangered Species Act (CESA) was passed in 1984 to provide the state Dept. of Fish and Game the authority to review projects for impacts upon species listed by the California law. It augments federal law with more stringent requirements and standards. Lists of threatened and endangered species are updated periodically.

Jurisdictions, agencies and individuals are affected by these Acts if listed species occur on a property proposed for a development project. Projects which could adversely impact such species must either (a) be modified to avoid any "taking" of a species by harming it or its habitat, or (b) obtain state and federal permits to allow the project and any "incidental take" deemed unavoidable. Violations of either law may result in fines and imprisonment.

The permits involved may be issued pursuant to the development of a "Habitat Conservation Plan" (HCP) for the project area. Such plans may be specific to an individual property or to a larger area. It should describe the area and the boundaries of the HCP, the species in question, mitigation and monitoring aspects, and funding necessary to implement the plan.

Both state and federal agencies involved with habitat preservation have made a more concerted effort in recent years to require local governments to more rigorously enforce the provisions of these laws. Local governments may do so in two basic ways: (1) ensuring governmental agencies and individuals do not violate the provisions of the Acts by providing adequate project review; and (2) developing Habitat Conservation Plans on a sub-regional and regional scale to address habitat preservation needs. These plans are developed with the involvement of lead federal and state agencies.

[For more information concerning implementation of the Endangered Species Acts as specifically related to rural areas, refer to the Rural Unincorporated Area Issues & Policies section of the General Plan].

Strategies, Policies and Implementation

Habitat and biodiversity for Santa Clara County can be maintained and enhanced through the following set of strategies:

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
Strategy #4: Evaluate Effectiveness of Environmental Mitigations

The emerging statewide consensus for growth management reflects among other things a balancing of two critical needs, the need to designate areas of sufficient development potential to accommodate urban population and employment growth, and the need to designate areas of critical resource value which must be provided long term if not permanent protection. The current jointly-adopted growth management strategy of the cities and County of Santa Clara is consistent with that emerging statewide consensus, and the strategies for preserving habitat and biodiversity further build upon that basis.

There is significant concern that the next 20-25 years will be crucial if California and the nation are to adequately preserve remaining habitat and biodiversity, rather than having to rely on restoration measures. If we are truly at such a turning point, implementing the strategies and policies most appropriate at the local and regional level will not only make a major contribution to efforts at the state and national level, but will also be more cost-effective and enhance overall quality of life.

➔ *Policies and Implementation*

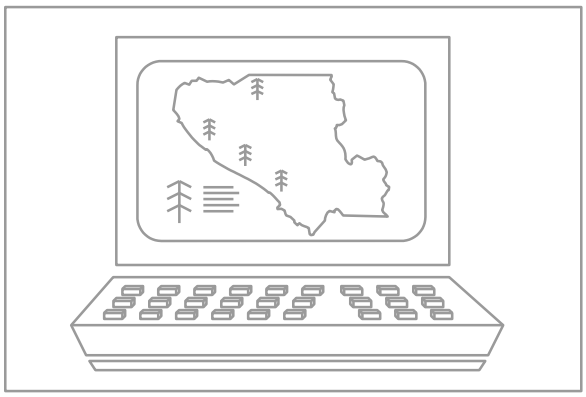
C-RC 27
Habitat types and biodiversity within Santa Clara County and the region should be maintained and enhanced for their ecological, functional, aesthetic, and recreational importance.

C-RC 28
The general approach to preserving and enhancing habitat and biodiversity countywide should include the following strategies:

1. Improve current knowledge and awareness of habitats and natural areas.
2. Protect the biological integrity of critical habitat areas.
3. Encourage habitat restoration.
4. Evaluate the effectiveness of environmental mitigations.

Strategy #1: Improve Current Knowledge and Awareness of Habitats and Natural Areas

Strategy 1 recognizes the need for better general knowledge of habitat types and their distribution. Furthermore, even if perfect knowledge were available of the types and locations of habitats, there is much we don't know about the interactions and natural processes within habitats. Habitats and natural communities are more than the sum of their individual member species, nor are they static. Fuller understanding of key relationships is needed to ensure an adequate basis for planning.



Policies and Implementation

C-RC 29
Multi-jurisdictional coordination necessary to adequately identify, inventory, and map habitat types should be achieved at the local, regional, state, and federal levels.

Implementation Recommendations

RC(i) 9
Develop and maintain a regional database/inventory and mapping program of habitat types and biodiversity which can be shared among local, regional, state and federal agencies, as well as local community organizations (e.g. Natural Diversity Data Base, Lands and Natural Areas Program, CDFG).

Strategy #2:
Protect the Biological Integrity of Critical Habitat Areas

On the countywide level, the growth management strategy of the cities and County figures prominently in preserving the integrity of habitats by differentiating lands intended for resource conservation from lands suitable and intended for urbanization. Current joint urban development policies mandate that critical resource areas should be excluded from cities' Urban Service Areas, helping to delineate urban from non-urban areas oriented to resources conservation.

The latter areas are often referred to generally as "resource conservation areas," and the rationale for excluding them from cities' Urban Service Areas also includes:

- avoidance of prevalent natural hazards,
- limited accessibility,
- steepness of terrain, and
- limited feasibility of providing adequate levels of urban services, among other factors.

If current Urban Service Area policies were augmented by development and adoption of long term urban growth boundaries (UGB), areas not included within the UGB would be provided an additional measure of protection. Therefore, at the countywide, or multi-jurisdictional level, preservation of habitat integrity could be furthered by adoption and implementation of the UGB concepts. However, there are additional aspects to habitat preservation which should be addressed, on both the countywide level and as related specifically to rural unincorporated land use policy.

Natural areas and communities of regional and state significance may be identified and designated for their uniqueness or the diversity of threatened or endangered species dependent upon these areas. The geographic extent of such areas may span more than one jurisdiction. An example is the serpentine soils habitat that is found through much of the eastern Diablo Range and foothills. For such areas, Regional Habitat Conservation Plans, or RHCPs, may help conserve habitats and ensure consistency between jurisdictions which have regulatory authority over these habitat areas. Types and intensities of various land uses within areas covered by habitat conservation plans should not be allowed to degrade the integrity of wildlife habitat and vegetation.

Recognizing that large scale preserves are not always possible, and that many areas of habitat may already be fragmented, another aspect of protecting the integrity of critical habitat involves preserving linkages between habitat areas. Such linkages, or "corridors" provide the effect of having larger intact preserves by permitting travel and interaction of species between non-contiguous areas. They also reduce the isolation of small populations of a species threatened with local extinction. Wildlife migration and movement patterns, the particular types of vegetation and habitat in a given area, and the type of land use and development that is permitted all factor in determining the location and type of linkages that are appropriate. In Santa Clara County, further study of the usefulness of preserving wildlife corridors or linkages between protected areas would be most useful.

[Note: Refer to the Rural Unincorporated Area Issues & Policies part of the General Plan for further elaboration and more detailed policies].

Policies and Implementation

C-RC 30
Habitat and other resource areas not suitable or intended for urbanization should be excluded from urbanization, and non-urban development which occurs within resource conservation areas should minimize impacts upon habitat and biodiversity.

C-RC 31
Areas of habitat richest in biodiversity and necessary for preserving threatened or endangered species should be formally designated to receive greatest priority for preservation, including baylands and riparian areas, serpentine areas, and other habitat types of major significance.

C-RC 32
Land uses permitted in resource conservation areas should not be allowed to degrade the integrity of natural habitat.

C-RC 33
Linkages and corridors between habitat areas should be provided to allow for migration and otherwise compensate for the effects of habitat fragmentation.

Implementation Recommendations

C-RC(i)10
Augment existing countywide growth management (Urban Development Policy) by delineation and adoption of long term urban growth boundaries (UGBs) to more clearly differentiate resource conservation areas from lands intended for urbanization.

C-RC(i)11
Develop, as resources permit, "Regional Habitat Conservation Plans" (RHCPs) through joint effort of the County, cities, U.S. Dept. of Fish and Wildlife, and the state Dept. of Fish and Game.

C-RC(i)12
Develop in conjunction with "Regional Habitat Conservation Plans" educational programs and/or materials for the public and landowners regarding sensitive resources within their area and available best management practices appropriate for preserving those biotic resources.

C-RC(i)13
Acquisition of areas of significance through the County's Open Space Authority, MROSD, County Parks, National Wildlife Refuge, and other agencies and non-profit organizations for permanent preservation.

C-RC(i)14
Evaluate inventories of natural areas and habitat types to determine the need for linkages of various types, given the land use and development patterns, and other factors.

Strategy #3:
Encourage Habitat Restoration

Strategy 3 promotes restoration of ecologies and habitats which have been degraded to the point that regeneration must be assisted. Although restoration efforts have much to recommend them, such measures should be viewed as the option of last resort in comparison to the more cost effective, preventive strategies. Flood control projects that incorporate natural flood plain features, wetlands for augmenting wastewater purification, and reforestation are three examples of restoration endeavors which have been found to be effective and cost-efficient, combining good resource and financial management objectives.

Policies and Implementation

C-RC 34
Restoration of habitats should be encouraged and utilized where feasible, especially in cases where habitat preservation and flood control, water quality, or other objectives can be successfully combined.

Implementation Recommendations

C-RC(i)15
Explore opportunities for restoration of habitat, particularly with respect to wetland, riparian, and other habitat types rich in diversity or needed to protect threatened and endangered species. {Implementors: Cities, County, RWQCB, state agencies}

Strategy #4:
Evaluate Effectiveness of Environmental Mitigations

Over the long term, many efforts to preserve habitat and biodiversity will prove successful, whereas others may not. Monitoring of changing conditions and the effectiveness of mitigations required of development projects will provide the information needed to improve upon existing strategies and programs. Although resources can be scarce for such needed follow-up studies, over time, evidence of the effectiveness of some mitigations and programs, such as riparian restoration will accumulate and instruct future habitat conservation efforts.

Policies and Implementation

C-RC 35
The status of various threatened and endangered species and the effectiveness of strategies and programs to preserve biodiversity should be monitored and evaluated on an ongoing bases.

C-RC 36
Specific project mitigations for the purpose of preserving habitat should be monitored for a period of time to assure the likelihood of their effectiveness.

[Note: for more detailed policies and implementation recommendations regarding habitat and biodiversity preservation applicable specifically to rural areas, refer to the Rural Unincorporated Areas Issues & Policies part of the General Plan.]

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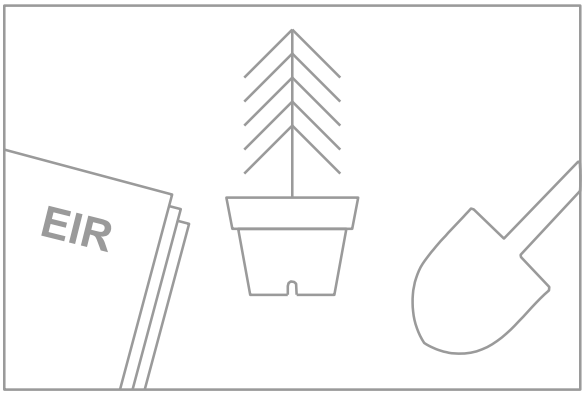


Agriculture & Agricultural Resources

Background

ROLE OF AGRICULTURE

■ The Agricultural Economy

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 remains a fundamental element of this region's economy and employment base.

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 from 1993 was estimated to be over $150,000,000. Nursery crops, mushrooms, cut flowers, fruits, nuts, berries, vegetables and grains are all grown within Santa Clara County.

Two of the most important trends in recent years include intensification and specialization of agriculture in Santa Clara County. As evidence, the three individual crops of highest reported value in 1991 were nursery crops, mushrooms, and cut flowers. Such crops use less land, but frequently involve higher capital investment costs and labor costs, depending on the crop type.

■ Other Important Functions of Agriculture

Few pockets of agricultural land use remain in the North Valley, now mostly converted to urbanization. The primary areas of remaining large and medium scale agriculture are located in the valley areas of South County, especially south and east of Gilroy. These lands represent an even more valuable resource to be preserved on account of scarcity, as well as being a finite, irreplaceable resource.

Agriculture and the remaining supply of highly valuable agricultural lands are not only of great economic importance, but also provide:

- productive use of lands not intended for urban development;
- an inexpensive, locally-grown supply of many types of food, close to a growing urban area of 1.5 million consumers;

Santa Clara County Agriculture Crop Value, 1993

	Total Value
Vegetable Crops	$72,842,000
Nursery Crops	24,820,000
Floral Crops	21,408,000
Livestock & Poultry	15,428,000
Fruits & Nuts	11,201,000
Field Crops	5,715,000
Bushberries & Strawberries	3,055,000
Seed Crops	2,310,000
Total	**$156,779,000**

Source: Santa Clara County Agriculture Crop Report, 1993.

- scenic relief from the monotony of continuous urban development; and
- diminished threat to life and property in areas prone to flood hazards.

All urban areas of the U.S. depend upon the non-urban, agricultural regions for daily food supply. As the supply of prime farmlands nationwide decreases, and as the costs of growing and transporting food supplies over great distances increase, the importance of retaining a local supply of agricultural lands becomes more critical over time.

MEETING THE CHALLENGES TO AGRICULTURE PRESERVATION

The challenges to agricultural preservation in Santa Clara County, as in the Bay Area as a whole, can include:

- ongoing potential for urban expansion and conversion;
- existing patterns of incompatible land use, intrusion of new residential development and nuisance claims against agricultural activities;
- high land costs and associated property tax assessments;
- foreign and statewide competition;
- the increasingly high risk, capital-intensive nature of the industry; and
- the lack of an adequate supply of affordable agricultural worker housing.

In recent times, extensive conversion of agricultural lands to urban uses on the scale seen from the 1950s to the 1970s has been replaced with conversions of a smaller, more incremental nature. Nevertheless, as the supply of prime lands continues to shrink, the cumulative effect of even these incremental reductions becomes proportionately greater. In order to preserve both the agricultural industry and the supply of remaining prime farmlands, the general approach to meeting these challenges must ensure land use stability and dependability, enhance the industry's economic viability, and provide adequate inventory and monitoring capability.

Strategies, Policies and Implementation

The strategies and policies outlined in the General Plan at the countywide level are pro-active in nature. They acknowledge the importance of agriculture to the county as a whole and the need for multi-jurisdictional efforts to continue to preserve agricultural lands and the rural character of agricultural areas. The strategies are listed below:

Strategy #1: Inventory, Map and Monitor the Status of Agricultural lands
Strategy #2: Maintain Stable Long Range Land Use Patterns
Strategy #3: Enhance the Long Term Economic Viability of Agriculture

➔ ***Policies and Implementation***

C-RC 37
Agriculture should be encouraged and agricultural lands retained for their vital contributions to the overall economy, quality of life, and for their functional importance to Santa Clara County, in particular:
a. local food production capability;
b. productive use land not intended for urban development; and
c. protection of public health and safety.

C-RC 38
General public awareness and understanding of the importance of agriculture and the goals of agricultural preservation should be encouraged countywide.

Strategy #1: Inventory, Map, and Monitor the Status of Agricultural Lands

Ongoing efforts to monitor and evaluate changes to the supply of remaining agricultural lands are necessary to understand the cumulative impact of ongoing incremental conversion to non-agricultural purposes. Monitoring is also valuable for purposes of documenting the changing status of agricultural lands, as defined by classifications used by the state's Farmland Mapping Program. Furthermore, definitions and measurements of agricultural land supply should be consistent from the state to the local government level.

Policies and Implementation

C-RC 39
Adequate inventories, mapping and monitoring of the agricultural land supply should be provided, and consistent definitions of agricultural land, forms of measurement, and monitoring between state and local governments encouraged.

Implementation Recommendations

C-RC(i)16
Local government participation in statewide Farmland Mapping Program. {Implementors: County, cities, state}

Strategy #2: Maintain Stable, Long Range Land Use Patterns

Without long term land use stability, secure investment in an increasingly capital-intensive agricultural industry is not feasible. Before the 1980s, conversion for an expanding urbanized area consumed vast acreages of prime agricultural soils. Since then, losses to urbanization have been smaller and more incremental in nature; however, given the very limited acreage of agricultural lands remaining today, even small, incremental losses may have a significant cumulative impact.

Protecting agricultural lands does not require an absolute end to urban expansion and development. What is critical is that areas of greatest importance are identified and given highest priority for preservation, and that a variety of means be employed as appropriate to solidify the land use basis for continuing agricultural land uses. The areas of South County generally south and east of Gilroy, as well as areas in vicinity of Morgan Hill, represent the last remaining areas of large scale agriculture in Santa Clara County.

Another general threat to the long term viability of agriculture is the intrusion of incompatible land uses in agricultural areas. Residential development in particular can be affected by the noise, dust, odors and other impacts of agricultural operations. Even when the agricultural land uses have been long established in an area, farmowners and operators are often subjected to claims of nuisance by neighboring homeowners, once residential development is introduced. "Right-to-farm" legislation and adequate real estate disclosure requirements are often employed to reduce the potential for such nuisance claims. Mediation services may also reduce the potential impacts to farmowners subjected to nuisance claims.

Policies and Implementation

C-RC 40
Long term land use stability and dependability to preserve agriculture shall be maintained and enhanced by the following general means:

a. limiting the loss of valuable farmland from unnecessary and/or premature urban expansion and development;
b. regulating non-agricultural uses in agricultural areas, and their intensity and impacts on adjacent lands;
c. maintaining agriculturally-viable parcel sizes; and
d. minimizing conflicts between adjacent agricultural and non-agricultural land uses, through such means as right-to-farm legislation and mediation of nuisance claims.

C-RC 41
In addition to general land use and development controls, agricultural areas of greatest potential long term viability should be identified and formally designated for permanent preservation.

C-RC 42
Interjurisdictional coordination and cooperation necessary to achieve agricultural preservation goals and strategies should be encouraged. These goals should include:

a. preservation of remaining areas of large and medium scale agriculture in South County;
b. encouragement of retention of agricultural lands in San Benito County adjoining South County agricultural areas ; and
c. discouragement of Urban Service Area (USA) expansions into agricultural areas when LAFCO determines that a city's USA contains more land than is needed to accommodate five years of projected growth and development.

Implementation Recommendations

C-RC(i)17
Establishment of mutually-determined long term urban growth boundaries, and continued used of USA boundaries and concepts for compact urban form.

C-RC(i)18
For the area south and east of Gilroy, commonly referred to as the "agriculture preserve," assess the cumulative impacts of city, County, and LAFCO policies and guidelines on the long term viability of agriculture. Furthermore assess the possible means of either preserving those lands in long term agricultural use and/or of mitigating the impacts of any changes in land use over time. {Implementors: LAFCO, County, City of Gilroy (ongoing study)}

C-RC(i)19
Evaluate the various means available for permanent protection of agricultural lands designated through inter-local agreements as official preserves, including:

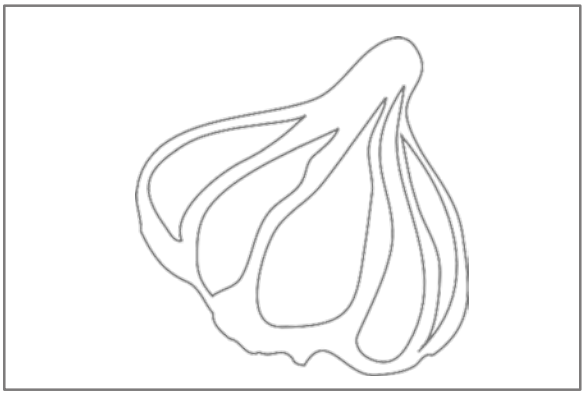
a. transfer, purchase or dedication of development rights;
b. cumulative impact mitigation fees (Sonoma, Alameda Counties' programs provide examples);
c. acquisition priority-setting by the County's Open Space Authority;
d. establishment of land trusts or land banking to hold ownership of permanently protected lands; and
e. use of binding inter-local agreements between affected jurisdictions regarding the policies and implementation measures involved.

C-RC(i)20
Continuation of the inter-jurisdictional South County Joint Area Planning process, augmented by inter-county cooperation and coordination efforts with other counties such as San Benito County.

C-RC(i)21
Procedures for third-party mediation of disputes and nuisance claims against agricultural activities.

Strategy #3: Enhance the Long Term Economic Viability of Agriculture

Finally, if the economic viability of agriculture is allowed to decline due to preventable causes, the economy of the South County and the agricultural land supply are made less secure. Simply because agricultural production no longer makes up a majority of the economic output of Santa Clara County is no reason to discount its importance. Sound land use planning for stability and predictability only addresses certain aspects of economic viability—another is marketing and technical support.



If the importance of local agricultural products were more fully appreciated by the residents of urban communities, the linkages between urban areas and agricultural areas would also be more apparent.

➔	***Policies and Implementation***

C-RC 43
Long term economic viability of agricultural activities shall be maintained and enhanced by providing

a. improved markets for locally-grown products;
b. property tax relief;
c. appropriate application of "renewable," organic agriculture and other innovative, cost-efficient growing techniques; and
d. adequate agricultural worker housing supply.

Implementation Recommendations

C-RC(i)22
Marketing and educational programs to promote local agricultural products and industries.

C-RC(i)23
Production of safe, decent, and affordable agricultural worker housing. (see Housing Chapter for Rural Unincorporated Area Issues & Policies)

[Note: for more detailed policies addressing agricultural preservation issues applicable specifically to the rural areas, refer to the Rural Unincorporated Area Issues & Policies section of the GP].

Mineral Resources

Background

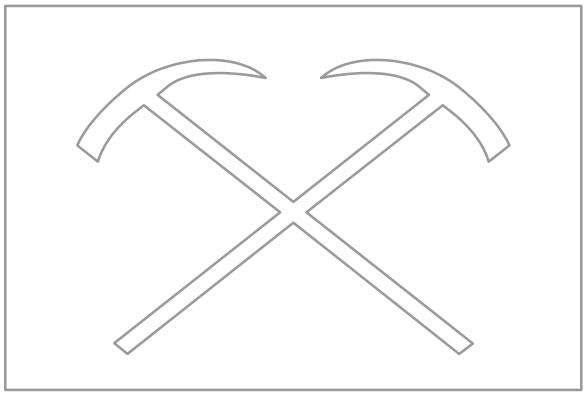
TYPES AND SIGNIFICANCE OF MINERAL RESOURCES

■ Types of Mineral Resources

Mineral resources of significance found and extracted in Santa Clara County include construction aggregate deposits and, to a lesser extent, salts derived from evaporation ponds at the edge of San Francisco Bay. Because of their different nature, salt evaporation ponds and the policy issues concerning them are not addressed to the extent of construction aggregates. Primary issues regarding construction aggregates are those concerning preservation, environmental impact and reclamation of quarry sites and similar operations.

■ Significance of Mineral Resources

Construction aggregates, such as sand, gravel, and crushed stone, 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. Because transport costs are a significant aspect of overall supply and pricing, it is imperative that local mineral resource



supplies be conserved for maximum long term availability. As sand and gravel deposits in the Bay Area have been nearly depleted, it has become necessary to rely primarily upon crushed stone for construction aggregates.

■ 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 state agencies. Eight (8) are currently in operation (see table). The table below identifies the deposits, the resource sector designation assigned to each by the state, and whether the deposit is located within the Unincorporated areas of the County.

[Note: For sector maps and sidebar explaining State designation process, refer to Rural Unincorporated Area Issues & Policies part of General Plan].

PLANNING IMPLICATIONS OF MINERAL RESOURCE PRESERVATION

■ Land Use Compatibility

The implications for land use planning in order to preserve local mineral resources and ensure their future availability are basically two-fold: (a) protecting existing and potential sites from development that would preclude mineral extraction, and (b) assuring that access routes are available to large transport vehicles.

Additional issues having major policy implications include the need to minimize adverse environmental impacts of extraction operations and transport, as well as the need to adequately plan for and execute reclamation plans for sites no longer used for extraction. Finally, newly proposed sites should not be incompatible with surrounding land uses.

■ Minimizing Environmental Impacts

Extraction operations and transport are often accompanied by a variety of adverse environmental impacts, some of which are unavoidable or cannot be fully mitigated. Some of the major impacts include disruption of drainage patterns, increased erosion and pollution, removal of topsoil and vegetation, habitat loss, air pollution, increased traffic volumes and hazards, noise, road surface damage, and others. Proposals to expand existing sites or create new quarries should be thoroughly evaluated to determine whether environmental impacts can be reduced to an acceptable level, balancing the need for the resource with alternatives to the proposed activity.

Recycling of used construction materials such as concrete and asphalt have been suggested as one way of extending the useful life of both quarries and landfills. Locating such facilities in conjunction with existing quarries would help minimize environmental impacts of recycling aggregates, including transport impacts.

■ Reclamation Issues

Reclamation of discontinued extraction sites is another major aspect of environmental impact mitigation. Reclamation plans not only make it

Table: Quarries in Operation on Unincorporated Lands in Santa Clara County (1992)

Quarry Name (Owner/Operator)	Street and Applicable City	Location
1. Azevedo (Raisch)	Hillsdale Ave.; San Jose	Inside Urban Service Area
2. Curtner (De Silva)	Scott Creet Rd.; Milpitas	Inside Urban Service Area
3. Lexington (West Coast (West Coast Aggregates)	Lime Kiln Cyn. Rd.	Outside Urban Service Area
4. Permanente (Kaiser Cement)	Permanente Rd.; Cupertino	Inside Urban Service Area
5. Polak (Granite Rock)	Monterey Rd.	Outside Urban Service Area
6. Serpa (Raisch)	Old Calaveras Rd.; Milpitas	Inside Urban Service Area
7. Stevens Creek	Stevens Cyn. Rd.	Outside Urban Service Area
8. Swenson	Calaveras Rd.;	Inside Urban Service Area

possible to restore the site as much as possible for appropriate, subsequent uses, but also lessens the potential for long term environmental damage resulting from unreclaimed quarries.

Reclamation of quarries also provides benefits in terms of public safety and aesthetics. Reclamation of salt evaporation ponds involves related, but somewhat different issues. Salt ponds are created by levees. If discontinued for extraction purposes, future uses of the areas should be consistent with the resource conservation goals, objectives and policies intended to preserve the baylands environment in its natural state.

Strategies, Policies and Implementation

The variety of issues and concerns associated with preserving and managing mineral resource extraction require a comprehensive set of strategies and policies. As outlined by the General Plan, this approach consists of three basic strategies:

Strategy #1: Ensure Continued Availability of Mineral Resources
Strategy #2: Mitigate the Environmental Impacts of Extraction and Transport
Strategy #3: Reclaim Sites for Appropriate Subsequent Uses

➔ *Policies and Implementation*

C-RC 44
Local supplies of mineral resources should be recognized for their importance to the local, regional, and state economy. Countywide strategies for preserving and managing mineral resources include:

a. ensuring continued availability of mineral resources to meet long term demand;
b. mitigating environmental impacts of extraction and transportation; and
c. reclaiming sites for appropriate subsequent land uses.

C-RC 44.1
The mineral resource maps listed below that are contained within State Department of Conservation, Division of Mines and Geology Open File Reports 99-01, 96-03, and 88-19 are hereby incorporated by reference within the Santa Clara County General Plan:

1. ***DMG Open File Report 88-19*** contains only one map, "Mineral Land Classification of the A. J. Raisch Paving Company San Bruno Canyon Greenstone Deposits, October 1988."

2. ***DMG Open File Report 96-03:***
   A. Mineral Land Classification Maps:
      1. "Generalized Mineral Land Classification Map of the South San Francisco Bay Production-Consumption Region, 1996." [scale 1:125,000]
      2. "Revised Mineral Land Classification Map: Aggregate Resources Only, South San Francisco Bay Production-Consumption Region, 1996," for the following USGS quadrangles:
         a. Milpitas Quadrangle
         b. Mindego Hill Quadrangle
         c. Mountain View Quadrangle
   B. Designated Areas Update Maps: "Regionally Significant Construction Aggregate Resource Areas in the South San Francisco Bay Production Consumption Region, 1996," for the following USGS quadrangles:
      1. San Jose East Quadrangle
      2. Calaveras Reservoir Quadrangle
      3. Milpitas Quadrangle
      4. Los Gatos Quadrangle
      5. Cupertino Quadrangle
      6. Mindego Hill Quadrangle

3. ***DMG Open File Report 99-01:***
   A. Mineral Land Classification Maps:
      1. "Generalized Mineral Land Classification Map of the Monterey Bay Production-Consumption Regions, North Half, 1999." [scale 1:100,000]
      2. "Revised Mineral Land Classification Map: Aggregate Resources Only, Monterey Bay Production-Consumption Region, 1999," for the following USGS quadrangles:

a. Chittenden Quadrangle
b. Morgan Hill Quadrangle

B. Designated Area Update Maps: "Regionally Significant Construction Aggregate Resource Areas in the Monterey Bay Production Consumption Region, 1999," for the following USGS quadrangles:
1. Gilroy Quadrangle
2. Mount Madonna Quadrangle
3. Pacheco Peak Quadrangle
4. Chittenden Quadrangle

[Amended Aug. 7, 2001; File #: 3415-01GP]

Strategy #1: Ensure Continued Availability of Mineral Resources

Mineral resource deposits of construction aggregates are a finite, non-renewable resource. The locations of these resources are determined by geologic factors. If they are to be made available to meet the long term needs of the local and regional economy, jurisdictions must not preclude their availability by allowing incompatible adjacent land uses. Access must also be preserved by minimizing development along haul routes which could make it infeasible to use the route for transport. Like other "locally unwanted land uses," or LULUs, for short, mineral resource sites can be nuisance-causing land uses; however, like landfills, they are a necessary land use that must be accommodated with a minimum of disruption.

Policies and Implementation

C-RC 45
Current and future demand for mineral resources in Santa Clara County, particularly construction aggregates, should be ensured by the following means:
a. inventorying existing sites, identifying and properly designating potential new sites for protection measures;
b. preserving deposits and access routes;
c. increased use of recycled material; and
d. proper development of new quarry sites.

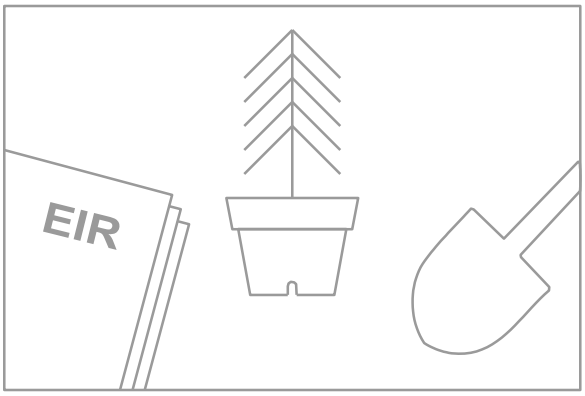
C-RC 46
Existing sites and access routes for regionallysignificant resources should be protected from incompatible land uses and development that would preclude or unnecessarily limit resource availability.

Strategy #2: Mitigate the Environmental Impacts of Extraction and Transport

Quarries, in particular, inevitably create unwanted environmental impacts, regarding both extraction and transport. To the extent possible, such impacts should be minimized through a variety of means, ranging from enclosure of operations, like the Kaiser Permanente site dome, to various requirements to safeguard local streams and habitat from damage.

Policies and Implementation

C-RC 47
Potentially adverse environmental impacts from extraction and transport of mineral resources should be minimized to the greatest extent possible, including, but not limited to:
a. nuisances, such as dust, odor, debris, and noise;
b. disruption and damage to natural features, such as ground cover, topography, drainage, habitat, groundwater, and related issues; and
c. increased traffic volumes and damage to road surfaces.



Strategy #3:
Reclaim Sites for Appropriate Subsequent Uses

Because the deposits are a finite resource, quarrying operations should only be considered a temporary land use, and adequate reclamation planning must be incorporated from the beginning of operations. In one sense, reclamation is one more aspect of mitigating environmental impacts after extraction operations are discontinued. Reclamation also functions to repair the site for appropriate subsequent uses. One example is Vasona Park and the groundwater recharge facilities located there. This highly used park was constructed from a sand and gravel extraction site. Open space uses such as parks are not the only possible subsequent land uses, but such uses must ensure the safety of the general public.

Policies and Implementation

C-RC 48
Reclamation for safe and beneficial future use of mineral resource extraction sites should be ensured through adequate planning, discretionary land use controls, and monitoring of reclamation plan implementation

[Note: for more detailed policies and implementation recommendations concerning mineral resource issues applicable specifically to rural areas, refer to the Rural Unincorporated Area Issues & Policies Part of the General Plan].

Heritage Resources

Background

TYPES AND SIGNIFICANCE OF HERITAGE RESOURCES

■ Types of Heritage Resources

Heritage resources are those particular types of resources, both natural and man-made, which due to their vulnerability or irreplaceable nature deserve special protection if they are to be preserved for current and future generations. The types of resources addressed as heritage resources include:

- historical sites, structures, and areas;
- archeological and paleontological sites and artifacts; and
- historical and specimen trees.

[Note: Rare and endangered species of plants and animals are addressed under the subject of "Habitat and Biodiversity."]

■ Significance of Heritage Resources

Heritage resources are important for a variety of reasons, including potential scientific value, cultural and historical value, and "place" value, in addition to their irreplaceability. Knowledge of the natural world, understanding of cultural origins, continuity with the past, and the sense of place that defines us and distinguishes Santa Clara County from all other places are all enhanced through heritage resource preservation. For example, preservation of archeological sites provides valuable insights into the lives of people and their cultures of which there is no other evidence.

In the face of increasing homogenization, urbanization, and anonymity of American culture and places, resources unique to each region and locality become even more significant. More than curiosities, landmarks by which to navigate, or tourist attractions, heritage resources should be considered the birthright of

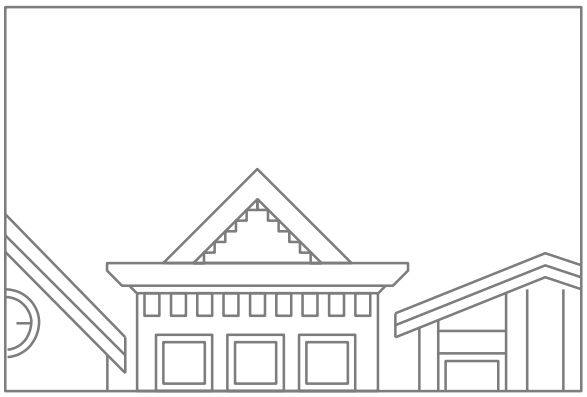
successive generations of residents. If preserved and integrated with the new, our historic buildings, groves of trees, and other resources immeasurably enrich the experience of urban and rural landscapes. Rehabilitation and restoration for new uses or for commemoration, especially within older, central urban communities can also help revitalize economies and reverse urban decline in ways urban "renewal" programs of the recent past often failed to do.

CHALLENGES TO CULTURAL HERITAGE RESOURCE PRESERVATION

The challenges to preserving cultural heritage resources are numerous, including:

- destruction from natural hazards, such as seismic activity and natural decay;
- loss through redevelopment of urban areas;
- inadequate financial support for preserving and maintaining resources; and
- lack of knowledge, appreciation, or respect.

Strategies to overcome these and other challenges must try to address not only the various mechanisms available to preserve resources, but also public attitudes and awareness of their value.



Strategies, Policies and Implementation

The general approach to cultural heritage resource protection outlined by the General Plan consists of three basic strategies:

Strategy #1: Inventory and Evaluate Heritage Resources
Strategy #2: Prevent or Minimize Adverse Impacts on Heritage Resources
Strategy #3: Restore, Enhance and Commemorate Resources

➔ *Policies and Implementation*

C-RC 49
Cultural heritage resources within Santa Clara County should be preserved, restored wherever possible, and commemorated as appropriate for their scientific, cultural, historic and place values.

C-RC 50
Countywide, the general approach to heritage resource protection should include the following strategies:

1. Inventory and evaluate heritage resources.
2. Preventor minimize adverse impacts on heritage resources.
3. Restore, enhance, and commemorate resources as appropriate.

➡ *Strategy #1: Inventory and Evaluate Heritage Resources*

Each of the cities of Santa Clara County and County government maintains its own inventory of heritage resources in some form. Inventories of heritage resources serve several purposes:

- to document the existence of identified resources and their location;
- to help evaluate the significance, quality, and protective status of the resources;

- to form the basis for recommendations that resources of various kinds be included in state inventories or the National Register of Historic Places;
- to insure that local decision-makers take heritage resource conservation into account; and
- to publicize and increase awareness of the value of heritage resources.

Inventories may be initiated by formal action, such as the case when surveys are commissioned for an area or jurisdiction. As conditions change, inventories must be updated and maintained. Incidental observations by members of the public as well as by various governmental agencies involved with such work may add to the knowledge base. However, involvement of local historians and architectural historians should be integral to the work of conducting and maintaining adequate resource inventories.

➔ ***Policies and Implementation***

C-RC 51
Inventories of heritage resources should be maintained as the basis for local decision-making regarding such resources.

Implementation Recommendations

C-RC(i)24
Update inventories and evaluations of heritage resources. Survey resources as necessary to augment existing inventories.

Strategy #2:
Prevent or Minimize Adverse Impacts on Heritage Resources

Irreplaceable resources may be lost or damaged due to accidental or natural forces, as may be the case when earthquake activity damages a structure, but losses should not be due to carelessness, ignorance, or inadequate safeguards. Historic and specimen trees deserve the same kind of special consideration given to historic sites, structures and districts. Preventing losses to heritage resources, given their irreplaceable nature, should take precedence wherever possible over attempts to compensate or minimize the impact.

However, when loss or damage to such resources is unavoidable, impacts should be mitigated to the maximum extent possible. For example, if an historic home cannot be saved from a proposed development project, there may be a possibility that it could be moved. In another example, a grove of heritage trees may be proposed for removal due to a road widening project. Route selection and placement alternatives may be able to preserve some if not all of the resource.

Historic districts are often employed to conserve heritage resources, because they offer certain safeguards against inadvertent actions which could harm or destroy heritage resources. They further provide protection to an area of interest in which there may be several types of resources of differing value, all of which, however, deserve some degree of regard and protection. Specific ordinances, regulations, or review procedures may also be employed, depending on the resource.

➔ ***Policies and Implementation***

C-RC 52
Prevention of unnecessary losses to heritage resources should be ensured as much as possible through adequate ordinances, regulations, and standard review procedures. Mitigation efforts, such as relocation of the resource, should be employed where feasible when projects will have significant adverse impact upon heritage resources.

C-RC 53
Cities should balance plans for urban redevelopment with the objectives of heritage resource preservation in such cases where potential conflicting interest may arise. Care should be taken to integrate heritage resources with new development wherever possible.

Implementation Recommendations

C-RC(i)25
Review administrative procedures and enforcement for effectiveness.

C-RC(i)26
Explore designation of historic districts to preserve character of areas rich in heritage resources.

Strategy #3: Restore, Enhance and Commemorate Resources

Depending on the resource, treatment of heritage resources may vary. The general goal should be first to preserve, restore and commemorate heritage resources of greatest value, through a variety of means, and secondly to preserve as much of the heritage value of a resource as is possible, if complete restoration is not feasible or practical.

A common example would involve restoration of the facade and other major exterior elements of a historical building, but to modernize the structure's interior as required for other uses. This approach preserves the historical character of the structure without limiting the user or owner of a property to the singular goal of complete restoration. Even moving a resource should be preferable, if possible, to demolition, in the case of historic structures.

The resources necessary to perform restoration and commemoration work may be obtained from various sources, including incentive tax credits for restoration, local preservation funds, and with the recent passage of federal legislation, from funds set aside for such purposes in the Intermodal Surface Transportation Efficiency Act, or ISTEA. Finally, public awareness and appreciation of heritage resources should be considered an important aspect of communitywide preservation efforts. The public need not merely be resigned to the loss of heritage resources over time if there is improved awareness of the available safeguards and incentives.

Policies and Implementation

C-RC 54
Heritage resources should be restored, enhanced, and commemorated as appropriate to the value and significance of the resource.

C-RC 55
Public awareness and appreciation of existing heritage resources and their significance should be enhanced through community organizations, neighborhood associations, the educational system, and governmental programs.

C-RC 56
Heritage resource acquisition, preservation, restoration, and interpretation projects eligible for funding with County Parks Charter Funds are identified in the "Santa Clara County Heritage Resources Inventory" adopted by the Board of Supervisors.

Implementation Recommendations

C-RC(i)27
Publicize financial resources from ISTEA and federal income tax credits for restoration of designated resources.

C-RC(i)28
Publish inventories of heritage resources.

C-RC(i)29
Organize community organizations and constituencies for heritage resource preservation.

Note: for more detailed policies and implementation recommendations regarding heritage resource issues applicable specifically to rural unincorporated areas, refer to the Rural Unincorporated Area Issues & Policies portion of the General Plan].

Scenic Resources

Background

DIVERSITY OF SCENIC RESOURCES

Santa Clara County has a diversity of natural settings and landscapes unequaled in the Bay Area. Coastal mountain ranges to the west of the valley, lushly vegetated with evergreen forests, and the oak chaparral of the Diablo Range on the east together frame an urban landscape which itself has a wide variety of settings and amenities. Add to all this the beauty of its natural rivers and streams, the wetlands near the Bay's edge, and urban parks and architecture of distinction, and there is little reason to wonder why so many have found it an attractive, hospitable place to reside.

VALUE OF SCENIC RESOURCES

At one time, much of the valley lands were in agricultural uses, particularly orchards and many other flowering crops. Now mostly urbanized, the north valley is an expanse of homes, businesses, and roadways. The clutter, noise, distractions, and, in places, unsightliness of urban life are unavoidable. More than ever, the scenic and aesthetic resources of Santa Clara County provide valuable relief from the all too often monotonous uniformity and tensions of urban life. As our urban environment and economy continue to grow and intensify, the psychological and even spiritual value of natural and man-made beauty grow also.

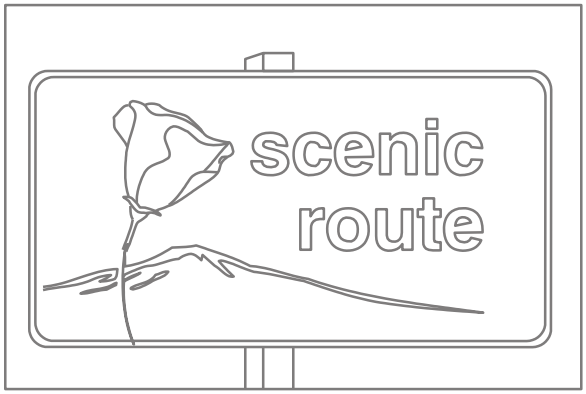
The largely undeveloped hillsides visible from the valley floor, and the other scenic characteristics of the area help distinguish Santa Clara County from its neighboring counties and cities, furthermore enhancing the overall attractiveness and competitiveness of the county's economy. Attractive, restful urban park and open space settings also improve the livability of the immediate environment in which most of us spend the majority of our lives. Without such resources, overall quality of life in Santa Clara County would be greatly diminished.

For all the natural beauty available to residents and visitors of this vast state, it may be most important to preserve the beauty and scenic quality of the resources closest to us. All deserve the opportunity in their everyday lives to realize the inherent beauty of nature, on both a grand and small scale, without having to travel great distances from home to do so. The goals and policies of all jurisdictions in Santa Clara County should be to ensure such opportunities to all residents, regardless of socio-economic status, and to ensure that future residents may also enjoy the scenic and aesthetic qualities of our surroundings.

Strategies, Policies and Implementation

The general approach for preserving and enhancing the scenic values of both natural and built environments should at a minimum include the following strategies:

Strategy #1: Manage Growth and Plan for Open Space
Strategy #2: Minimize Development Impacts On Significant Scenic Resources
Strategy #3: Maintain and Enhance the Values of Scenic Urban Settings



Policies and Implementation

C-RC 57
The scenic and aesthetic qualities of both the natural and built environments should be preserved and enhanced for their importance to the overall quality of life for Santa Clara County.

C-RC 58
The general approach to scenic resource preservation on a countywide basis should include the following strategies:

a. conserving scenic natural resources through long range, inter-jurisdictional growth management and open space planning;
b. minimize development impacts on highly significant scenic resources; and
c. maintaining and enhancing scenic urban settings, such as parks and open space, civic places, and major public commons areas.

Strategy #1:
Manage Growth and Plan for Open Space

If the various growth management and open space preservation strategies of the county and this General Plan are successfully implemented, much of the county's scenic resources will also be preserved and enhanced. The County's joint urban development policies, augmented by application of the Urban Growth Boundary concept, together with the current land use policies of the County will continue to serve to help maintain the scenic value of natural, non-urban areas.

Policies and Implementation

C-RC 59
Scenic values of the natural resources of Santa Clara County should be maintained and enhanced through countywide growth management and open space planning.

Implementation Recommendations

C-RC(i) 30
Maintain joint urban development policies differentiating urban areas from lands not intended or suitable for urban development.

C-RC(i) 31
Delineate and adopt long term urban growth boundaries. (see Growth & Development Chapter)

C-RC(i) 32
Purchase of park and public open space lands.

Strategy #2:
Minimize Development Impacts on Significant Scenic Resources

The countywide urban development policy and open space preservation strategies do not preclude the need for special measures to conserve scenic resources of special significance, such as prominent hillsides and ridgelines highly visible from the valley, scenic roadway corridors, and county gateways. Development of inappropriate design, location, scale or density can have a disproportionately greater impact upon highly visible, prominent areas such as ridgelines. Major entryways or "gateways" to the County also deserve special consideration for scenic conservation.

Policies and Implementation

C-RC 60
Hillsides, ridgelines, scenic transportation corridors, major county entryways, and other areas designated as being of special scenic significance should receive additional consideration and protections due to their prominence, visibility, or symbolic value.

C-RC 61
Public and private development and infrastructure located in areas of special scenic significance should not create major, lasting adverse visual impacts.

Implementation Recommendations

C-RC(i) 33
Interjurisdictional planning for protecting scenic hillside areas visible from the valley floor. Plans should promote low densities, unintrusive design, and use of clustering principles to minimize impacts. (Implementors: Cities, County)

C-RC(i) 34
Pursue Scenic highway designation and protections. [refer to Parks and Recreation chapter]

C-RC(i) 35
Design guidelines and review procedures adequate to mitigate potential adverse visual impacts of development in hillside, ridgeline, and other areas of special scenic significance.

Strategy #3: Maintain and Enhance the Scenic Values of Urban Settings

Attractive, scenic urban settings provide opportunities for leisure and recreational activities close to where the majority of Santa Clara County's residents work and live. Urban development should not detract visually from the urban landscape, and efforts to restore natural features to the urban area should be encouraged, such as scenic public plazas and commons areas, streetscaping, and tree planting and landscaping programs.

Policies and Implementation

C-RC 62
Urban parks and open spaces, civic places, and public commons areas should be designed, developed and maintained such that the aesthetic qualities of urban settings are preserved and urban livability is enhanced. Natural resource features and functions within the urban environment should also be enhanced.

Implementation Recommendations

C-RC(i) 36
Downtown revitalization planning and programs incorporating improvements to areas in need of restoration and adequate urban open space.

C-RC(i) 37
Tree planting and streetscaping programs. (Implementors: Cities, County, community organizations)

C-RC(i) 38
CDBG (Community Development Block Grant) funding for beautification and neighborhood restoration plans.

[Note: for more detailed policies and implementation recommendations regarding scenic resources applicable specifically to rural areas, refer to the Rural Unincorporated Area Issues & Policies portion of the General Plan].

Solid Waste Management

Background

LEGISLATIVE MANDATES – INTEGRATED WASTE MANAGEMENT ACT (1989)

In adopting the Integrated Waste Management Act of 1989, the state legislature transformed state law formerly restricted to regulating landfills in favor of an approach providing for more comprehensive management of solid waste. The legislation was based on the following rationale, summarized from the Act:

- California's 1988 solid waste generation and disposal amounted to more than 1,500 pounds of waste per capita, more than any other state and twice the per capita rate of most industrialized countries.
- 90% of it was being disposed of in landfills, which can pose a threat to ground water, air quality and public health.
- Despite the fact that most of the state's remaining landfill capacity would be nearly exhausted by the mid-1990s, the state had no coherent strategy to cope with the problem.

REQUIRED WASTE REDUCTIONS AND STRATEGY

In response to the urgency of the situation, the state mandated that each locality reduce the amount of wastes disposed of in landfills by 25% by 1995 and by 50% by the year 2000. The cornerstone of the legislation is a four part, hierarchical strategy to address the problem through:

- source reduction and reuse, rather than just creating landfill capacity;
- recycling and composting;
- waste transformation, such as for energy generation; and
- landfilling, as the last and least desirable option.

These strategies form the basis for countywide management plans and programs designed to achieve the mandated reductions.

"GARBAGE 101"

Generation of solid wastes by Santa Clara County's businesses, industries, households, and other sources has increased steadily as the population and economy of the area have grown over the last several decades. Santa Clara County homes, businesses, and industries generate on average 5,500 tons and dispose of 4,800 tons of solid waste a day. Countywide, 43% of the wastes in fiscal year 1987/88 were from residential sources, 57% from commercial sources. The total mass of the solid waste disposed of in the county on a yearly basis would cover approximately six lanes of Highway 101 from Palo Alto to Gilroy to a depth of 14 feet.

To some extent, wastes are an inevitable byproduct of our society, which in turn creates the need for landfills. Remaining landfill capacity in Santa Clara County is 53 million tons. Landfill capacity is projected to last through 2019 with 25% volume reduction in the waste stream, longer if mandated 50% reductions are obtained.

Landfill disposal costs are also an important issue. These have more than doubled in recent years, from an average of $18.20 per ton in 1986 to as high as $45.00 per ton in 1993. Increased costs are due in large measure to stricter operating regulations and stringent landfill closure and post-closure requirements.

Landfilled wastes declined from roughly 2 million tons to 1.74 million tons from fiscal year 1987 to 1992. Progress towards meeting state-mandated reductions continues as curbside recycling and other programs reach full implementation.

COMPOSITION OF THE "WASTE STREAM"

By weight, yard and paper waste represent 17.5% and 40% respectively of materials discarded into the average municipal "waste stream," the term used to refer to the amount of wastes generated and disposed of. Glass, food,

plastics, and metal range from 7% to 8.5%. However, by volume, paper (50%) and plastic combine to make up an astounding 60% of the composition of landfilled wastes, followed by miscellaneous debris (20%), organic matter (10%, metals (6%) and glass (1%).

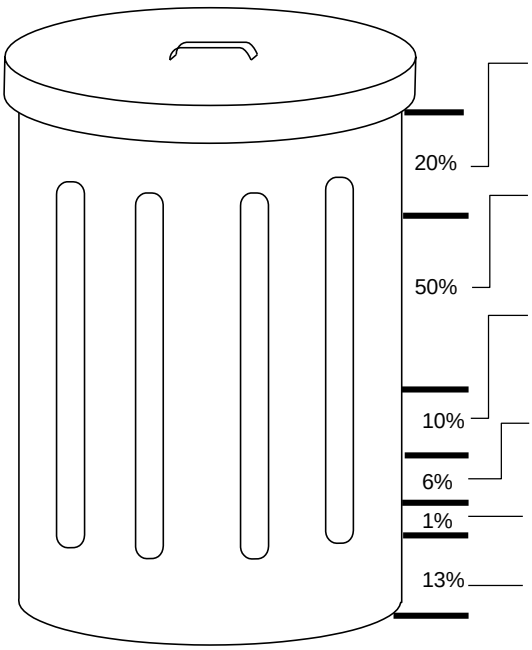
PLANNING IMPLICATIONS AND POLICY ISSUES

Several major implications derive from this knowledge of the waste stream, combined with what is known concerning landfill capacity and the cost of meeting environmental standards for new landfill sites. The factors involved include:

- the amount of recyclable, reusable, or compostible materials typically found in the waste stream is considerable;
- making the most efficient use of these materials, such as metals, paper, and plastic recycling, would conserve raw materials, often saves businesses and industries money, and would significantly extend the capacity of landfills;
- much of the waste material need never have entered the waste stream, such as excessive product packaging, and yard wastes which could be composted and transformed into a resource itself;
- wastes which cannot or should not be reused or recycled may provide an alternative source of energy;
- rising landfill disposal costs add economic impetus to efforts to reduce the amount of wastes to be landfilled.

Increasing awareness of the environmental hazards associated with landfills, such as the potential for groundwater contamination and air pollution, has made the prospect of siting new landfills more difficult than ever. The extensiveness of urbanization in Santa Clara County, as in other metropolitan areas, and the increasing amount of rural area development have also limited the opportunities for locating landfills where they will not pose nuisance and health threats to the population. To the extent that countywide solid waste management efforts are successful, the need for such facilities can also be reduced.

Typical Composition of Land Filled Waste in the United States (by volume)



Miscellaneous
Includes construction and demolition debris tires, textiles, rubber, and disposable diapers.

Paper
Includes packaging, newspapers, telephone books, glossy magazines and mail-order catalogs.

Plastic
Includes milk jugs, soda bottles, food packaging, garbage bags, and polystyrene foam.

Metal
Includes iron as wellas aluminum and steel cans for food and beverages.

Glass
Includes beverage bottles, food containers, and cosmetics jars.

Organic
Includes wood, yard waste, and food scraps.

Strategies, Policies and Implementation

The four-part hierarchy of strategies mandated by the Integrated Waste Management Act have been adopted by the County of Santa Clara and the cities as the principal means by which to manage solid wastes and achieve waste reduction goals established by state law. In priority order, these strategies include:

Strategy #1: Encourage Source Reduction and Reuse
Strategy #2: Facilitate Recycling and Promote Composting
Strategy #3: Explore Transformation Opportunities
Strategy #4: Plan for Adequate Landfill Capacity

➔ *Policies and Implementation*

C-RC 63
Santa Clara County shall strive to reduce the quantity of solid waste disposed of in landfills and to achieve or surpass the requirements of state law (the law currently specifies 25% reduction of landfilled wastes by 1995, and 50% by 2000).

C-RC 64
Countywide solid waste management efforts shall be guided by the hierarchy of strategies outlined below, emphasizing resource recovery in accordance with state law:
a. Source reduction and reuse,
b. Recycling and composting,
c. Transformation, and
d. Landfilling as final option.

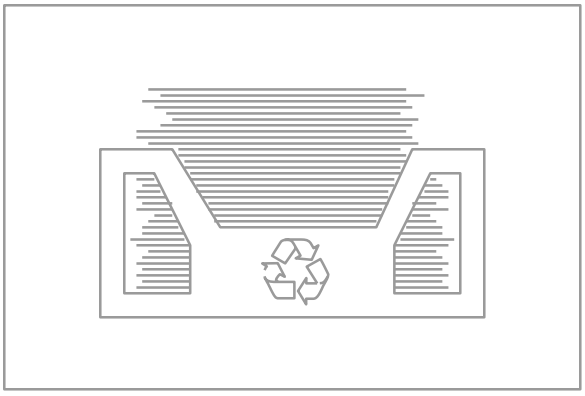
C-RC 65
All solid waste management services and facilities shall conform to applicable federal, state, and local regulations and standards.

➡ *Strategy #1: Encourage Source Reduction and Reuse*

Much of the paper, yard waste, plastic and metals that enter the waste stream need never have been introduced, due to excessive packaging, unrestricted deliveries of junk mail, and similar causes. California, with its long growing season and temperate climate, also generates more yard wastes than many other parts of the country; however, many localities are striving to reduce these wastes through neighborhood and community composting programs. Reuse of construction materials also diverts large quantities of wastes from demolition and building projects that would otherwise be landfilled. Many communities have initiated community centers where used construction materials may be made available for reuse by individuals.

➔ *Policies and Implementation*

C-RC 66
Santa Clara County shall seek innovative and effective means of reducing the primary components of solid waste generated by homes and businesses, including but not limited to such efforts as reducing waste paper, junk mail, unnecessary product containers, and yard waste.



Implementation Recommendations

C-RC(i) 39
Explore how to implement innovative source reduction and reuse strategies that have proven successful in other jurisdictions (eg: neighborhood centers for reuse of construction materials).

Strategy #2:
Facilitate Recycling and Promote Composting

Recycling and materials recovery and reuse have been a key component of solid waste management in Santa Clara County for years. Its benefits in addition to waste volume reduction include:

- cost-efficiency of reuse of some materials over manufacturing new products, such a aluminum cans;
- recovery of materials which can be used to create derivative products; and
- minimizing demands for raw materials.

Markets for recycled materials are another important factor in achieving waste reduction goals. Without products which are made from recycled materials, such as newsprint, supply outstrips demand. By mandating that percentages of certain products make use of recycled materials, incentives, and other strategies, demand can be increased. If industries which make use of recycled materials as feedstock are encouraged to locate and develop in Santa Clara County, both economic development and waste management goals are ultimately served.

Additionally, composting of yard and other organic wastes not only reduces the volume of landfilled wastes, but also creates a resource of value to communities. Composted materials are needed for landscaping projects, community and neighborhood gardening. Some cities in the U.S. have helped offset the costs of management programs with wholesale and retail sales of composted organic wastes.

Policies and Implementation

C-RC 67
Adequate solid waste collection and recycling services shall be provided to all county residents. Recycling services for all commercial and industrial establishments shall be evaluated and expanded wherever feasible.

C-RC 68
Santa Clara County shall consider efforts to increase markets for goods produced from recycled/reused materials as an essential feature of all efforts to manage solid waste and conserve landfill capacity and shall include such considerations in policies regarding acquisition of materials, equipment, and facilities.

C-RC 69
Efforts to increase markets may include siting of industrial facilities which will use recycled/reused materials as feedstock, thus providing local markets for materials collected by local recycling programs.

C-RC 70
Neighborhood and community composting centers should be explored and evaluated for purposes of reducing landfilled yard waste.

Strategy #3:
Explore Transformation Opportunities

Most cities and counties in California will have to rely to a certain extent on transformation methods to reduce the volume of landfilled wastes and conserve limited landfill capacity. With adequate environmental safeguards and technology, concepts such as incineration of wastes for supplemental electricity generation hold promise for meeting both waste management and local energy objectives.

➔	***Policies and Implementation***

C-RC 71
Potential applications for waste transformation and energy generation technologies should be explored and encouraged.

➡	***Strategy #4:*** ***Plan for Adequate Landfill Capacity***

Major issues concerning landfills include not only maintaining sufficient long term disposal capacity, but also siting new landfills, expanding existing facilities, mitigating environmental impacts, and reclamation for subsequent land uses.

➔	***Policies and Implementation***

C-RC 72
Decision-making regarding the siting of new landfills, the expansion of existing sites, and the location of other solid waste management facilities shall balance the need for such facilities with the full range of environmental quality issues involved.

C-RC 73
Santa Clara County acknowledges the need for long term disposal capacity and will strive to maintain 20 to 30 years of ongoing collective disposal capacity.

C-RC 74
Expansion of existing landfill sites should be encouraged and explored thoroughly in preference to siting new landfills.

C-RC 75
New landfill sites shall not be located in the baylands or other environmentally-sensitive areas.

C-RC 76
Only open space land uses for which public health and safety can be assured or additional waste management-related uses may be allowed for reclaimed landfill sites.

[Note: for additional policies and implementation concerning solid waste management applicable specifically to the rural, unincorporated areas, refer to the Rural Unincorporated Area Issues and Policies portion of the Plan].

Implementation Recommendations

C-RC(i) 40
Implement countywide public education efforts to support local recycling and waste reduction programs.

C-RC(i) 41
Implement countywide programs to support the development and implementation of recycling programs in commercial/industrial facilities.

C-RC(i) 42
Support legislative and other measures to develop markets for recyclable materials.

Energy Resources

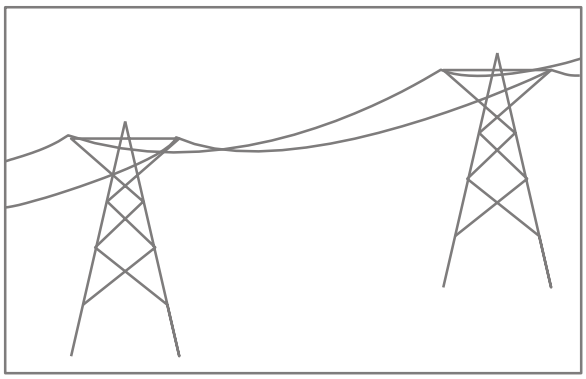
Background

TRENDS IN ENERGY DEMAND AND SUPPLY

■ Causes of High Demand

The energy needs of a modern, industrialized, highly mobile society such as the United States are considerable, given the size of our nation, its population, and per capita income levels. California exemplifies the high levels of energy use for which the U.S. is so well-known, being the most populous state, with well over 30 million residents, a highly industrialized economy, and an extensive and automobile-dependent transportation system.

Furthermore, Santa Clara County typifies the state's metropolitan regions in many, if not all respects. It has become the center of the high technology and computer industries. Its cities are suburban, low density, automobile-dependent creations which evolved under post-War conditions of relatively cheap, plentiful energy. And with industrialization has come a relatively prosperous, diverse population, with high demands for energy for basic domestic needs, travel, recreation, and other uses. Furthermore, many high technology and computer-related industries consume more gas and electricity than other industries, making reductions in industrial processes more important for local businesses.



■ Focus On Transportation Sector Efficiency

Statewide, nearly half of all the energy consumed is for transportation. More importantly, of the four major sectors, transportation is almost 100% dependent on petroleum as a fuel source. The level of petroleum-dependency for transportation is no better than during the early 1970s at the time of the Arab OPEC oil embargo. In the meantime, California and the nation have become more dependent upon imported oil rather than less so. By comparison, half of California's electricity generation is now supplied from alternatives to non-renewable fossil fuels–such as geothermal, hydroelectric, and nuclear–in contrast to the 1970s, when oil provided 50% of the state's electricity.

That improvement was not by accident. Major investments in energy efficiency over the last two decades have paid off so well that the state has been able to avoid building eight (8) 1,000 megawatt power plants and related infrastructure, such as substations and transmission lines. Not only is it cheaper per kilowatt to conserve than to have to generate new electricity, but conservation is the most benign alternative in environmental impact. It is far and away the most cost-effective alternative to improve air quality.

STATE PLANNING TO MEET PROJECTED DEMAND

According 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 percent per year for the next twenty years, through 2013. Significant portions of the projected increase will be due to population increases in the Central Valley, which has a less temperate climate than coastal regions, and the need to shift to electrically-powered vehicles, among the many aspects of a complex system.

The state-level plan for energy focuses on three major areas:

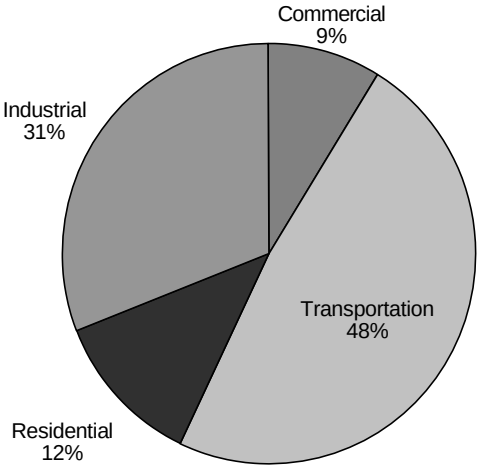
- continued investment in and reliance upon efficiency to meet most of the increased need;

- increased diversification of supply to minimize risk; and
- accounting for air quality impacts and energy costs.

With environmental and economic impacts in the forefront of efforts to implement the state plan, it should be no surprise to know that transportation energy and air quality issues will predominate. Reducing energy consumption in the transportation sector is not the last, but it is still a relatively unexplored "frontier" in energy efficiency planning.

The state-level strategy for energy efficiency in transportation involves reducing total "vehicle miles traveled," or VMT, shifting to alternative fuels and modes of travel, and increasing fuel efficiency standards for vehicles sold in the state. Local strategies for implementing the state energy plan must focus more on reducing VMT, reducing automobile-dependency, and providing transit services, among others—virtually the same set of strategies that apply to reducing traffic congestion.

California Energy Usage



Source: 1991-1992 State Energy Report

Strategies, Policies and Implementation

Despite the need for state and national policy for energy conservation, the importance of a strong, concerted, long term energy conservation effort at the local and regional levels should not be underestimated. Local governments, major industries, and community groups can perhaps be the most instrumental agents of progress in the effort to manage energy needs. In particular, land use, growth management, transportation system planning, and housing policy are well within local governments' capabilities.

Without progress in these areas, the state's utilities will have to rely more on new power generating facilities, with their associated economic and environmental costs. (Even electric vehicles, touted as part of the solution to long-term air quality problems, may place additional burdens on generating capacity, and vehicle battery recharging will only be economical during off-peak demand periods).

Furthermore, although energy costs are not foreseen to increase significantly in the near term, the threat of such increases, and possibly limited availability of gasoline, in particular, could have serious adverse impacts on the economy of Santa Clara County and the Bay Area. Higher costs to consumers and business, reduced disposable household incomes, more business failures, and higher unemployment are not welcome at any time, much less after enduring nearly a half decade of recession during the early 1990s.

Although measures on the local level will focus largely on reducing transportation energy demand, conservation in the industrial, commercial, and residential sectors should not be ignored. The basic strategies needed to improve energy conservation overall at the local and sub-regional level include:

Strategy #1: Reduce Transportation Energy Demand and Oil-Dependency
Strategy #2: Conserve Energy in Residential and Other Sectors.
Strategy #3: Increase Consumer and Public Awareness Through Education

➔ ***Policies and Implementation***

C-RC 77
Energy efficiency and conservation efforts in the transportation, industrial, commercial, residential, agricultural and public sectors shall be encouraged at the local, county (sub-regional), and regional level.

C-RC 78
The objectives of the state energy plan should be implemented at the local and regional level through an overall strategy consisting of:
a. reducing transportation energy demand and oil-dependency;
b. conserving energy in residential, commercial, agricultural, and industrial sectors; and
c. increasing consumer and general public awareness through education.

Strategy #1: Reduce Transportation Energy Demand and Oil-Dependency

Reducing transportation energy demand has many components, or sub-strategy areas, including growth management, compact development, transit investments, demand management, fleet conversions to alternative fuels and increased availability of alternative fuels to the general public. Further description and explanation of the use of these sub-strategies for reducing energy use may be found in the Growth and Development and the Transportation chapters of this Plan.

➔ ***Policies and Implementation***

C-RC 79
Energy use and fossil fuel dependency in the transportation sector should be reduced by the following general means:
a. growth management policies and implementation to minimize increases in the extent of the urbanized area and to promote balanced, compact urban development;
b. land use and development standards which support alternative transportation modes;
c. travel demand management, TDM, and transportation system operational efficiency;
d. expanded transit service; and
e. increased availability and use of alternative fuels.

C-RC 80
Sub-regional/countywide planning for Santa Clara County should place major emphasis on the inter-related goals, strategies and policies for improving energy efficiency in transportation, air quality, and reducing traffic congestion.

Implementation Recommendations

C-RC(i) 43
Adopt and implement the various recommendations outlined in the Growth & Development, Transportation, and Housing chapters of the Countywide Issues and Policies section of this Plan related to transportation energy demand.

Strategy #2: Conserve Energy in Residential and Other Sectors

Although much more has been accomplished for energy conservation in the sectors other than transportation since the 1970s, Santa Clara County can benefit from continued efforts to reduce energy demand in homes, buildings, and industry. Older homes can benefit from a variety of energy conserving improvements. And even more recent residential development can contribute to energy conservation by replacement of older appliances with more energy-efficient ones.

Moreover, many Silicon Valley industries inherently use large quantities of electrical power for production processes. Santa Clara County's economy is a world-class economy, tied to and in competition with that of many nation's, some of which are already more advanced in terms of overall energy efficiency. Improved energy efficiency can mean an improved "bottom line" and greater competitiveness for local industry.

Regional utilities plan to rely on conservation for the foreseeable future to meet increasing demand, rather than building new generating capacity. Improved efficiency in all sectors is necessary to achieve that primary objective and related environmental benefits.

Policies and Implementation

C-RC 81
Energy conservation in existing buildings and homes, particularly those pre-dating adoption of energy-efficiency building code standards, should be improved and encouraged.

C-RC 82
Alternatives to non-renewable energy sources should be encouraged and implemented in the design of new buildings and incorporated in the redesign and reconstruction of older buildings.

C-RC 83
Industrial and agricultural processes should be modified wherever feasible to take advantage of energy savings, to reduce operational costs, and to enhance competitiveness.

Implementation Recommendations

C-RC(i) 44
Increased application of technological advances in heating/cooling/lighting management systems for buildings, principally for the public, commercial and industrial sectors.

C-RC(i) 45
Continued use of utility-sponsored energy efficiency "audits" for homes and commercial structures.

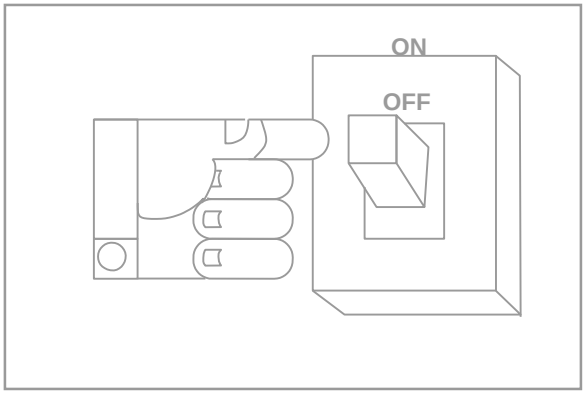
Strategy #3: Increase Consumer and General Public Awareness Through Education

Finally, the people, businesses, and community leaders of Santa Clara County cannot afford to look back on the problems of higher fuel costs and limited supply caused by the 1973-74 oil embargo as a mere aberration which will not recur. The particular circumstances of the embargo may not be repeated, but the issues highlighted by those events of 20 years ago have not lessened in importance.

Rather, it is more arguable that energy efficiency and conservation continue to grow in importance over time, as we deplete our domestic non-renewable supplies, and as our population and economy continue to grow. To the extent that the public understands and supports the growth management, land use, transportation, housing and other related energy-efficiency strategies addressed in this plan, an improved energy future will be our legacy.

➔ *Policies and Implementation*

C-RC 84
Countywide efforts to promote energy efficiency and conservation awareness should be continued and coordinated through public utilities, community organizations, the educational system, industries, and government. Direction and assistance of local gas and electric utilities should be sought in the development of education programs.



Safety and Noise

Countywide Issues and Policies

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- Summary
- Background
- Overall Strategies

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  - Strategy #3: Design, Locate and Regulate Development to Avoid or Withstand Hazards
  - Strategy #4: Reduce the Magnitude of the Hazard, If Feasible
  - Strategy #5: Provide Public Information Regarding Natural Hazards

(cont'd).

Safety and Noise

Countywide Issues and Policies

Aviation Safety I-31
- Summary
- Background
- Strategies, Policies, and Implementation I-32
  - Strategy #1: Limit Population Densities and Land Use Within Designated Safety Zones
  - Strategy #2: Regulate Structures and Objects Hazardous or Distracting to Air Navigation

Waste Water Disposal I-34
- Summary
- Background
- Strategies, Policies, and Implementation I-35
  - Strategy #1: Prevent Waste Water Contamination of Groundwater Supplies
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Introduction

Summary

This Chapter of the General Plan addresses a range of countywide public health and safety issues. While at first glance they may seem so diverse as to be unrelated, on closer examination it becomes clear that they all touch on aspects of natural and built environments which are critical to sustaining our quality of life. This chapter includes policies which are intended to minimize potential human or environmental injury and property damage.

The Safety Element of the General Plan is one of seven mandatory elements identified in State Government Codes addressed General Plan requirements. The Code directs local governments to evaluate the natural and built environment for potential hazards and, to the extent possible, assess and describe the risk factors of the most threatening of those hazards. Sections of this chapter are intended to satisfy those requirements.

The chapter includes the following sections:

- Hazardous Materials;
- Emergency Preparedness;
- Noise;
- Natural Hazards;
- Aviation Safety; and
- Wastewater Disposal.

[Amended Aug. 25, 2015; File #: 10184-11GP, Air Quality Section superseded by Health Element, Air Quality and Climate Change Section; Health and Safety Facilities Planning Section eliminated; chapter title changed from Health and Safety to Safety and Noise.]

Background

ESTABLISHING ACCEPTABLE LEVELS OF RISK

The General Plan guidelines point out that the safety element should contribute to land use policies and standards by relating the type and intensity of land use relative to estimated levels of risk, and to the availability of services and facilities to ensure safety.

Risk, by definition, implies assessing the probable outcome of development actions in relation to likely future events. Clearly, assessing "level of risk" implies a degree of imprecision given our incomplete knowledge of the future. Nonetheless, the guidelines recognize that this can be done in broad yet useful terms by comparing the likelihood of specific events to "unreasonable" levels of risk.

PERFECT SAFETY IS UNATTAINABLE

The concept of acceptable versus unreasonable risks recognizes that perfect safety is unattainable or so confining and costly as to be undesirable even if approached. Extremely unacceptable risks are relatively easy to determine, for example, buildings should not be placed on known active faults. Likewise, few would question the wisdom of standards of construction required to insure a high degree of safety in schools and hospitals.

The guidelines recognize that other risk situations which requires some local controls and regulation are less clearly definable. In some cases an exact and clear definition of acceptable risk is impossible. The solution in such cases must not only avoid unnecessary risk, but also must be economically and socially acceptable.

MINIMIZING PUBLIC COSTS

The County and cities are unable to guarantee that any development will not, at some point in the future, be adversely affected by the hazards identified in this chapter. Hazards, by their nature, defy precise prediction. The ideal would be to divert new development from areas with

high hazard potential and the policies of this chapter strive to achieve that objective. Problems arise however in areas where risk is more difficult to assess (i.e., residential development in areas far removed from fire and medical facilities) but there is enough evidence to raise doubts concerning the safety of residents or visitors under specific circumstances.

In some instances, where there is a significant factual question about whether a particular development has sufficiently mitigated risks from hazards to an "acceptable" level, the property owner may wish to proceed despite the existence of such a factual question. In such cases, it is important to consider potential costs to public agencies which may occur should disaster strike future residents or visitors of the project. The public costs of providing emergency services and disaster relief should be assessed and made a part of the decision making process.

RELATIONSHIP TO THE VISION STATEMENT

The Health and Safety Chapter policies address all the major themes and several goals of the Vision of the General Plan. By encouraging the development in the appropriate urban and rural locations, the policies strive to create Balanced Growth. The attention to minimizing risks for people and property addresses objectives for Livable Communities and Social Well-Being. The economic aspects of adequately planned waste management facilities, and accessible health services underscore community concerns for overall Economic Well-Being.

Overall Strategies

AVOIDING RISKS

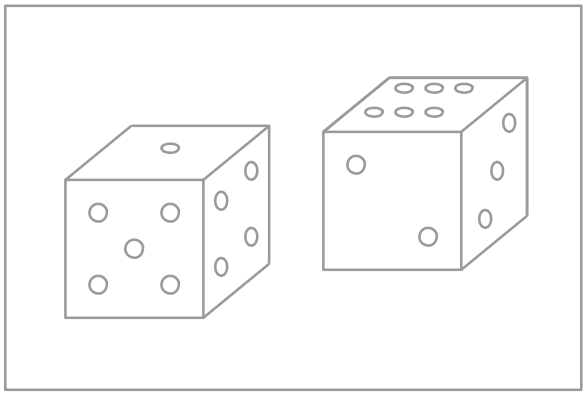
The strategies and policies in this chapter are intended to discourage development which will place occupants and visitors in unreasonable or avoidable high risk situations. Through these policies and the related Land Use policies, the County seeks to limit the range of land uses allowed in hazardous areas in order reduce the exposure of people and buildings to high risk.

The policies focus attention on and encourage cooperation in developing effective, economically feasible implementation procedures which do not unduly burden local businesses and individual households. The policies are also intended to minimize potential for undue financial burden on the County, city governments, other public agencies and, thus, the taxpayer by avoiding development which is likely to incur unusually high public service or disaster relief costs.

PREVENTION, MITIGATION, AND PREPAREDNESS

Although each section contains strategies which are unique to the issue, there are common qualities found in the policies of each section. These would include:

- Preventing exposure to dangerous conditions - Ideally we would be able to remove all danger to people and the environment. However, we do not live in an ideal world. First and foremost, the strategies encourage us minimize to the extent feasible the likelihood that harm will come to either people or the environment.
- Minimizing danger when exposure is unavoidable - Living in our complex, modern society entails certain risks. Where we have determined a certain level of risk is appropriate, we should use the appropriate measures to ensure that level is not exceeded.
- Being prepared for disaster - Despite our best efforts, disasters will nonetheless occur. We must prepare for these occasions in ways which will minimize death and injury, and ensure swift restoration of normalcy.



Hazardous Materials

Summary

This section of the Countywide Health & Safety Chapter provides an overview of countywide hazardous materials management responsibilities, with particular emphasis on those management issues which relate directly to the land use policies contained in the General Plan. Those seeking comprehensive and detailed information on specific local hazardous materials management plans and programs should contact the appropriate County or city office.

This chapter does not discuss the problems related to nuclear wastes, which come under federal regulation, or municipal solid waste, which is covered in the Santa Clara County Solid Waste Management Plan and is addressed in the Countywide Resource Conservation Chapter.

Toxic substances which contribute to the problems of air pollution include cadmium, beryllium, asbestos, lead and a variety of chemical substances which may be released from commercial and industrial processes as a result of improper storage, handling, disposal or transport, or as a result of natural disaster.

Background

The safe transportation, use, storage, and disposal of hazardous substances and wastes is vitally important to the continued well-being of all Santa Clara County residents, the local economy, and the natural environment. Protecting the public and the environment from exposure to dangerous substances while ensuring that hazardous materials controls are cost-effective for all users is a major challenge, but one which must be met.

HAZARDOUS MATERIALS MANAGEMENT LEGISLATION

During the past decade, Congress and the State legislature have adopted many measures which require specific actions by local governments in assessing and planning for the safe handling and disposal of hazardous materials. Among them are:

Federal
- Resource and Conservation and Recovery Act of 1965
- Comprehensive Environmental Response, Compensation, and Liability Act of 1980
- Emergency Planning and Community Rightto- Know Act of 1986
- Toxic Substances Control Act
- EPA Storm Water Discharge Program

State
- SB 1082 (Unified Hazardous Waste/Materials Management Regulatory Program)
- Sher Bill (AB1362 - Hazardous Materials Storage)
- Waters Bill (AB2185/2187 - Hazardous Materials Release Response Plans and Inventory)
- La Follette Bill (AB3777/1059 - Extremely Hazardous Substances)
- Toxic Gas Model Ordinance (AB1021)
- Cortese Bill (AB3750 - Hazardous Waste and/or Substance Site)
- Safe Drinking Water and Toxics Enforcement Act (Prop 65)
- Toxic Pits Cleanup Act
- State Superfund Act
- California Land Disposal Restriction Program (Modified 1985 and 1986
- Tanner Act (AB2948 - Hazardous Waste Management Plans)

This list is by no means exhaustive. Hazardous materials are regulated indirectly by some federal and state laws or programs addressing other issues.

It is important to note that Santa Clara County has long been a leader in the area of hazardous materials controls. In fact, the County and cities were early pioneers in the field with the Hazardous Materials Storage Ordinance, an act

which served as a model for federal and state legislation. Our local legislators, agency officials and business representatives have served and continue to lead hazardous materials control efforts at all levels of government.

WHAT IS A "HAZARDOUS" SUBSTANCE?

The Environmental Protection Agency has defined a "hazardous" substance as one "which, because of its quantity, concentration, or physiochemical 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." (Santa Clara County Hazardous Waste Management Plan)

As an indicator of the scale and diversity of hazardous materials use in Santa Clara County, an estimated 140,000 tons of hazardous waste was generated in 1986. Large industries generated just over 87,000 tons; smaller commercial, industrial, and institutional facilities (those with 10 or fewer employees) generated another 52,000 tons; and individual households produced an estimated 1,600 tons. The types and quantities of materials we use are a function of our lifestyles and the size and diversity of our local economy.

THE ROLE OF THE COUNTY AND CITIES

Most hazardous materials regulations originate with federal and state government. The County and cities do play a primary role in local enforcement of those regulations with one major exception. Although hazardous materials often present the greatest danger to the public and the environment while those materials are being transfered from one site to another the transportation of hazardous materials (e.g., its movement from point of origin to user to recycler or disposal site) is an enforcement responsibility assigned exclusively to the California State Highway Patrol and is beyond the control of local government. Regulation by the County and cities is limited to enforcing standards and procedures in the siting, construction and operation of businesses, farms and residences within their jurisdictions.

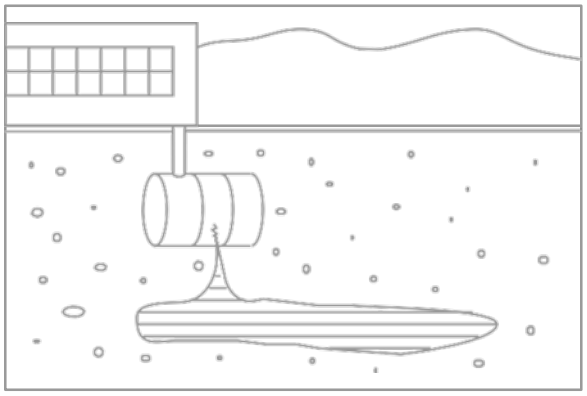
Despite this limitation, the County and cities can do much to protect both residents and the environment from exposure to hazardous materials by developing, adopting and implementing the hazardous materials plans and policies now required by law. They can further enhance the effectiveness of their efforts by working with other jurisdictions countywide to ensure coordinated, uniform enforcement.

The lack of coordination in enforcement and a fractured, complicated permit procurement process compromises the effectiveness of hazardous materials regulations and imposes unnecessary cost burdens to both local governments and businesses. Because they are so numerous and because so many agencies at every level of government are involved, implementation has lacked uniformity. The process a business which uses hazardous materials must follow to acquire the necessary permits to operate is legendary in its complexity. In addition, it is nearly impossible for a local business or farming interest, not to mention the local enforcement agencies, to stay current with all the regulations they are expected to know.

While the County and cities are not to blame for this situation, they can play a key role in its resolution. The County and cities have a major role to play in seeking revisions to federal and state laws which will permit a coordinated, less costly implementation of hazardous materials regulations.

EXISTING PROBLEMS WITH HAZARDOUS MATERIALS

Santa Clara County industries and agriculture are major users of hazardous materials. Even our households add to the demand for hazardous substances and contribute to the production of hazardous waste. Consequently, hazardous materials are moving around the County each day by railroad and highway. In addition, pipelines crisscross the county carrying flammable and explosive gases and petroleum products.



Despite the apparent beauty of Santa Clara County, our record for managing hazardous materials is less than exemplary. In the past, petroleum fuels and other toxic materials have spilled or seeped into the soil and underground aquifers, endangering public and private drinking water. There are currently 28 Superfund sites countywide.

The fact that most of our local hazardous materials regulations derive from federal and state legislation indicates that we are not alone among developed regions with large and complex local economies. It has taken some time for the drawbacks of our "clean", high-technology industries to become apparent. While these drawbacks are serious, they are not insurmountable. Clean alternatives have already been found to the many of the residual "toxics" from years past.

For the time being, our continued economic well-being and the quality of life we enjoy are tied to the production and use of goods involving hazardous substances. The near term challenge will be to protect people and the environment from harm without unduly burdening local industry and agriculture. Local ordinances such as the Toxic Gas Ordinance and the Risk Management and Prevention Program have proven successful in this regard.

HAZARDOUS WASTE MANAGEMENT LEGISLATION

The 1984 amendments to the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) which created the Superfund, 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/ 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 (CHWMP's). The function of CHWMP's is to promote the evaluation of local hazardous waste management issues and needs, and to make policy and program recommendations to better protect public health and safety and the environment while maintaining the economic viability of the state.

THE COUNTY HAZARDOUS WASTE MANAGEMENT PLAN

All of the cities in Santa Clara County joined the County in developing a CHWMP in order to create a comprehensive and coordinated countywide approach to hazardous waste management planning. This was accomplished by an eleven member committee consisting of representatives from the Board of Supervisors, several city councils, the semiconductor and manufacturing industries, public interest groups, environmental groups, and special districts. The Plan development process provided an opportunity for local, regional, and state agencies, as well as the general public, to participate.

The primary objective in developing the CHWMP is to protect the health, safety and economic well-being of both our citizens and the environment. The Plan maintains this objective while also recognizing the State-mandated responsibility to address the specific hazardous waste needs of local businesses and households. This is achieved through the CHWMP by:

- encouraging waste reduction and on-site treatment; and
- establishing a clear process for siting of appropriate, new hazardous waste facilities.

New and existing hazardous waste generators in the county will be encouraged and required 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.

A considerable reduction in the hazardous waste stream can be achieved through the use of existing technologies. Aggressive waste reduction efforts using new and evolving technologies will further reduce the need for future waste management capacity. Nevertheless, it is likely that we will need additional waste treatment and disposal facilities at some point. The CHWMP sets forth a planning process to anticipate and respond to those needs by:

- reducing hazardous waste generation;
- siting appropriate and economically feasible hazardous waste management facilities for waste streams which cannot be reduced; and
- signing intercounty agreements with other counties as a means of utilizing needed and available hazardous waste management capacity in other jurisdictions.

LOCAL REGULATION OF DEVELOPMENT

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 ensures that the public and the environment are shielded from dangerous material and activities. Where hazardous materials use must occur in proximity to other land uses, development standards can ensure that those materials are handled as safely as possible.

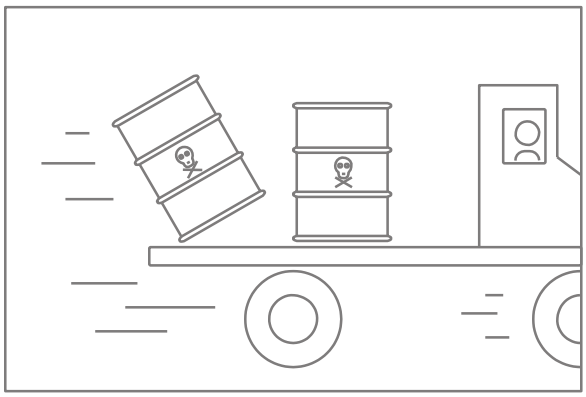
The Uniform Fire Code, the Uniform Building Code, and the Hazardous Materials Storage Ordinance include regulations pertaining to the safe use and storage of hazardous materials, and to the construction of structures which house activities involving hazardous materials. The General Plan policies and Land Use Map strive to separate, either geographically or structurally, hazardous activities from other uses.

As the county grows more urban in character, we will face new development issues with regard to hazardous materials. One issue now coming into focus is that of proximity between these materials and "non-industrial" uses (i.e., day care facilities, restaurants, etc.). Many of us laud the inclusion of convenience services in commercial and industrial developments. However, current regulations bar hazardous materials use or storage within a certain distance of such services. In planning for future mixed uses we must ensure that we are not unduly constraining the potential of our industrial areas. Achieving employment and economic objectives may call for new design and development standards to ensure both safe and convenient work environments.

The County and cities have used the hazardous materials plan development process as an opportunity to educate materials users and the general public about a range of related issues. This process can also serve as an incentive for local governments to establish working groups that include representatives of business, agriculture, and environmental organizations along with hazardous materials suppliers, and operators of hazardous materials treatment and disposal facilities. These groups are well-suited to assist local government in developing coordinated, cost-effective local hazardous materials regulations and policies which protect the public and the environment.

ENSURING THE ADEQUACY OF FACILITIES

Of particular significance to countywide land use planning is the state requirement that the CHWMP describe the process by which the County and cities will assess current and future facility needs and plan for adequate hazardous waste facility sites. The Hazardous Waste Management Plan adopted by Santa Clara



County includes a set of policies and criteria for siting hazardous waste management facilities through the year 2000.

The CHWMP is intended to compliment other local planning efforts through the adoption of consistent criteria for the approval or disapproval of proposals to site commercial off-site hazardous waste management facilities. The siting criteria address six areas of concern:

1. Protection of Residents of Santa Clara County
2. Assurance of the Structural Stability of the Facility
3. Protection of Water Quality and Resources
4. Protection of Air Quality
5. Protection of Environmentally Sensitive Areas
6. Protection of Social and Economic Goals

The siting criteria in the CHWMP serve an important function in the planning process and in evaluating specific facility proposals. While the criteria satisfy the need for an emphasis on public and environmental safety, the siting policies ensure that countywide facility siting needs and objectives are met. These siting criteria and policies will be used to determine appropriate facility design and performance standards, in addition to determining the acceptability of the selected site.

The CHWMP siting 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 facility or expand an existing hazardous waste facility. The criteria are designed to identify the most appropriate locations in regards to public and environmental safety. This will aid facility developers in identifying appropriate locations and understanding the major issues of community concern.

The jurisdiction's General Plan and the CHWMP are intended to compliment one another and will be applied to a project simultaneously. Consequently, in addition to meeting the CHWMP siting criteria, additional conditions can be imposed on a proposed facility as circumstances dictate.

Strategies, Policies and Implementation

The policies and implementation recommendations in this section reflect the common strategies found throughout the Health and Safety Chapter. Those common strategies are: first, minimize to the extent feasible the likelihood that harm will come to the public or to the environment.; second, where it is necessary to incur risk, develop the appropriate procedures to ensure public and environmental safety. In addition, the policies also establish the presumption of consistency between the General Plan and the CHWMP.

Overall strategies relating to hazardous materials and wastes are to:

Strategy #1: Manage Hazardous Materials Safely and Efficiently

By adhering to adopted building and development standards (i.e., Uniform Fire Code, Uniform Building Code, Hazardous Materials Management Plan, etc.), the County and cities can ensure that new development is designed and maintained in a manner that will shield or distance people and the environment from dangerous materials and activities.

Strategy #2: Ensure the Adequacy of Local Hazardous Waste Treatment Facilities

Where the use of hazardous materials is deemed necessary and appropriate, the County and cities should enforce reliance upon safe and cost-effective procedures. Through adoption and enforcement of the County Hazardous Waste Management Plan and other mandated hazardous materials programs, the County and cities can also ensure the safety, availability and adequacy of local hazardous waste treatment and disposal facilities.

Strategy #1:
Manage Hazardous Materials Safely and Efficiently

To be successful, a strategy to minimize risk must address several aspects regarding the administration of local programs. This must include assessing the effectiveness of procedures in protecting public and environmental health, in identifying opportunities for closer coordination of program implementation among local governments, identifying opportunities reduce time and cost to program users and administrators, and in ensuring safe, efficient use of existing treatment facilities and timely planning for future sites.

PROTECTING PUBLIC AND ENVIRONMENTAL HEALTH

In the case of land uses involving hazardous materials, County and city planning agencies can minimize public safety risks by ensuring that such materials are properly used and stored. These objectives can be achieved through local land use and development regulations. When evaluating local regulations, the County and cities should also assess their effectiveness in minimizing risk. Likewise, local governments should remain aware of progress made in the area of hazardous materials management and, where appropriate, incorporate new, more effective methods into their array of regulatory mechanisms.

COORDINATING IMPLEMENTATION AND SHARING RESOURCES

Federal and state regulation of hazardous materials expanded rapidly during the late 1980's. Coordinating the implementation of these regulations has proven to be a daunting and costly task for both business and government. Finding workable solutions to responsibly manage hazardous waste is a necessary step in sustaining the quality of life and economic health of the county.

The high degree of cooperation has made it possible to make great strides toward coordinating and streamlining the regulatory requirements imposed by federal and state government. Local governments, and business and community leaders continue to be state leaders in this area and deserve recognition for what has been accomplished. We should encourage all parties to continue working together to resolve the barriers which still remain to coordinated, effective implementation.

Despite progress toward coordinated effort, the County and cities are, nevertheless, individually responsible for enforcing certain regulations intended to protect public and environmental health. Federal and State mandates have spread planning, monitoring, and enforcement responsibilities among dozens of County and city agencies. This presents a serious challenge to the businesses, farmers and householders who must interact with these different agencies, not to mention the responsible agency. To ensure that hazardous materials regulations are effectively implemented, the County and cities must strive to further simplify and coordinate the work of these agencies countywide where ever possible.

IMPROVING THE REGULATORY SETTING

The complexity of hazardous materials management regulations and permitting procedures are well known to those who have had to navigate them. Given the federal and state origins of most of the laws governing hazardous materials, local government may be somewhat limited in its options for simplifying the regulatory setting. However, recent state legislation has been signed into law that is intended to address the complexity of the regulatory setting and help reduce costs of administration to both local governments and the private sector.

In 1993, Senate Bill 1082 became law, creating the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program. Its intent is to establish a single agency within a local jurisdiction that is responsible for:

- consolidating the administration of six major hazardous waste and materials management programs;
- consolidating permitting and other grants of authority;
- developing a single inspection and enforcement program; and,

- instituting a unified fee system to replace most of the fee systems in place previously.

Spanning many regulatory agencies, this program will require a well-coordinated effort between local fire protection agencies and the County Department of Environmental Health, primarily. Discussions began in 1994 regarding implementation of the new law and are ongoing. If successful, over time local business and industry should experience an improved regulatory setting and possibly lower costs for compliance.

Finally, the County and cities have the ability to contribute substantially to a broad understanding of and support for hazardous materials management objectives and regulations by establishing a centralized information source on all local hazardous materials regulations and permitting requirements.

➔	***Policies and Implementation***

C-HS 14
All feasible measures to safely and effectively manage hazardous materials and site hazardous materials treatment facilities should be used, including complying with all federal and state mandates.

C-HS 15
To achieve a more effective, efficient and economical regulatory environment, all feasible means to simplify and coordinate locallyimplemented hazardous materials management regulations should be considered.

Implementation Recommendations

C-HS(i) 6
Comply with all federal- and state-mandated hazardous materials planning and regulatory measures. (Implementors: County and Cities)

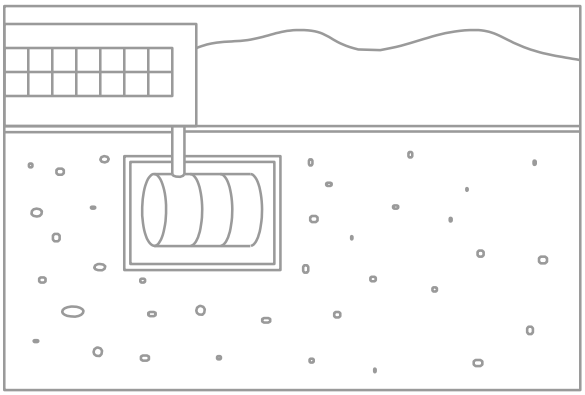
C-HS(i) 7
Publish a directory of hazardous waste management regulatory responsibilities and implementing agencies countywide.
(Implementors: County and Cities)

C-HS(i) 8
Establish and maintain a publicly-accessible electronic bulletin board whereby users and interested citizens may access current information pertaining to hazardous materials regulations and related permitting and inspection requirements.
(Implementors: County, Cities, and User Groups)

C-HS(i) 9
Join with local business, agricultural, and environmental organizations for the purpose of seeking revisions to federal and state hazardous materials regulations which will result in more effective, efficient and economical implementation.
(Implementors: County, Cities, and User Groups)

C-HS(i) 10
Assess all local hazardous materials regulations and procedures to determine how they might be carried out more effectively and with a reduction in time and cost to all users, including local government agencies.
(Implementors: County and Cities, User Groups)

C-HS(i) 11
Establish a working group of business, agricultural, environmental and government agencies for the purpose of assessing current hazardous materials use, storage and disposal requirements, and developing feasible strategies to improve effectiveness, efficiency and economy in their countywide implementation.
(Implementors: County, Cities, Business, Agriculture, and Environmental Organizations)



Strategy #2:
Ensure Adequacy of Local Waste Treatment Facilities

NEED FOR TREATMENT AND DISPOSAL FACILITIES

Throughout California, the difficulty of siting new hazardous waste management facilities has been a constraint to the development of an effective state-wide hazardous waste management system. This difficulty has been due primarily to public opposition and the ability of local governments to reject facility proposals for reasons other than technical safety. The irony in this situation is that we have continued to generate hazardous wastes; existing facilities are approaching capacity and waste is being stored in what were intended to be only transitional facilities.

ENSURING ADEQUATE TREATMENT AND DISPOSAL FACILITIES

Reducing the amount of hazardous waste is the preferred method for managing waste generated in Santa Clara County. However, successfully implementing source reduction will not preclude the eventual need for new off-site hazardous waste management facilities due to the county's large and varied waste streams. Identifying environmentally suitable locations in the county for future off-site hazardous waste management facilities is an important and necessary activity.

Failure to develop necessary new hazardous waste management facilities increases the likelihood that a public health or environmental disaster may occur. The lack of adequate facilities also compromises economic development. Manufacturers will not be inclined to move to or expand in areas where they perceive it will be a costly and protracted struggle to dispose of waste.

Finally, a fundamental tenet of the Tanner legislation is that each county take responsibility for managing the wastes generated by local businesses and industries. Consequently, a primary function of the Tanner legislation and local hazardous waste management plans is to ensure that there is an adequate supply of potential sites to accommodate needed hazardous waste management facilities. Furthermore, the Tanner legislation and local hazardous waste management plans ensure there is an equitable siting and public review process whereby waste management facilities may obtain the necessary local land use approvals for proprosals that conform with the CHWMP, local general plans, and applicable ordinances.

Given those objectives, state law requires that local discretionary land use actions be consistent with the CHWMP and that they not unnecessarily limit the availability of potential sites identified by the CHWMP facilities siting map and criteria. The importance of this requirement should not be underestimated. For the CHWMP to be effective, the jurisdictions which have jointly adopted it must ensure not only that it is properly implemented, but they must also ensure that individual local land use decisions do not have the cumulative effect of ultimately undermining the CHWMP.

Policies and Implementation

C-HS 15.1
Proposals to establish hazardous waste management facilities in Santa Clara County that are subject to the authority of the Countywide Hazardous Waste Managment Plan (CHWMP) shall comply with all substantive and procedural provisions of that plan and with all applicable state and federal laws concerning the establishment and safe operation of such facilities.

C-HS 15.2
The cities and County of Santa Clara shall ensure that all relevant discretionary land use and development decisions:

a. are consistent with the intent and provisions of the Countywide Hazardous Waste Management Plan (CHWMP), especially the facilities siting map and criteria, which identify potentially suitable areas for siting needed waste management facilities; and,
b. do not unnecessarily limit the availability of sites suitable for potential hazardous waste management facilities, as identified in the CHWMP facilities siting criteria and map.

[Amended Dec. 5, 1995; File #: 3644-95GP]

C-HS 16
To ensure criteria effectiveness and the adequacy of local facilities, periodically review and evaluate the facilities siting criteria of the Santa Clara County Hazardous Waste Management Plan.

Implementation Recommendations

C-HS(i) 12
Review and evaluate the County Hazardous Waste Management Plan siting criteria every three years to correspond with the triennial update of the State Plan.
(Implementors: County, Cities, User Groups, and Interested Citizens)

C-HS(i) 13
Continue implementing and improving the countywide Household Hazardous Waste Management Program.
(Implementors: County, Cities, and Citizens)

Emergency Preparedness

Summary

Despite our best efforts, natural and humancaused disasters occur periodically, sometimes causing widespread damage and destruction, as well as loss of life. Although we can't prevent such disasters from occurring in every case, we can help reduce damage and loss of life by minimizing development in hazardous areas and by adhering to development standards that reduce potential risks. Risk reduction is addressed in several of the preceding sections of the Health and Safety Chapter. In addition to risk reduction, we can prepare ourselves for the inevitable.

This section of the Health and Safety Chapter focuses on the efforts that should be taken to prepare in advance for natural and human-caused disasters. Its two basic strategies are:

Strategy #1: Plan for Immediate Disaster Response; and
Strategy #2: Plan for Post-Disaster Recovery

Toward that end, the policies and recommendations in this section encourage the County and cities to take actions which will protect the public and environment and will aid in the restoration of law and order in the event of natural or human-caused disaster.

Planning for emergencies already occurs at the county level, in each city, and in many individual agencies with "hazard-specific" responsibilities (i.e., wildfire management, hazardous materials incidents, etc.). This section is not intended to supplant any of those plans, but merely to identify the linkage between them and the General Plan, and to encourage continued efforts. Those interested in the full text of those individual plans should contact the implementing agency in County government or in their community.

Background

THE NEED TO BE PREPARED

■ Disasters Happen

Although we try to minimize human exposure to safety risks through our land use planning policies and development standards, natural and human-caused disasters do occur, including floods, wildfires, earthquakes, plane crashes, as well as others. Since we must acknowledge that disasters will inevitably occur from time to time, we must also accept the necessity of planning for them. Through emergency planning we can minimize the potential for loss of life and damage to property, and facilitate the rebuilding process when major damage occurs to private and public buildings and community infrastructure.

■ Immediate Response and Longer Term Recovery

To be truly comprehensive, emergency preparedness should take into account two separate, but overlapping phases: emergency response during or immediately following the disaster, and post-disaster recovery.

During major disasters, such as wild fires, earthquakes, or floods, our resources will be turned toward saving lives, minimizing damage to property and the environment, and containing the scope of destruction to the greatest degree possible. Once the flames are out, or the waters have receded, we must be able to effectively target our resources toward reuniting families, getting medical attention to survivors, and reconstructing our communities.

■ Elements of Local Emergency Preparedness Planning

To be effective, emergency preparedness efforts should take into account a number of basic considerations. Foremost should be saving lives and minimizing injuries by ensuring the availability of prompt medical treatment. Next would be containing the disaster and protecting property from further damage. Once the disaster has subsided or been contained, immediate steps must be taken to restore law and order and to provide essential services. Finally, the needs of survivors and the larger community must be answered so that life may return to a normal state.

■ Local Emergency Preparedness Planning Responsibilities

A number of local, state, and federal agencies have responsibilities for emergency preparedness planning. The County and cities each have mandated responsibilities to prepare individual emergency plans and cooperate with one another in developing a countywide emergency response plan. Thus, the County and each city bear both individual and collective responsibilities in planning for disasters.

EMERGENCY SERVICES PLANNING

■ State Planning Mandates

State Government Code Section 8607, as modified by SB1841 (Petris Bill), requires the California Office of Emergency Services to develop and implement "a standardized emergency management system for use by all emergency response agencies." The state, in turn, has directed all county and city governments to prepare emergency plans and agreements to provide mutual aid in the event of disaster. The State also created a strong incentive to participate in such planning activities by requiring that local governments must do so in order to qualify for any funding of response-related costs following declared disasters.

Santa Clara County established the Office of Emergency Services (OES) in the early 1950s, partly in response to federal and state mandates to do local emergency planning. The OES was vested with the responsibility for coordinating all public and private support agencies in the event of extraordinary emergency situations associated with natural and human-caused disasters. These agencies include law enforcement, fire and rescue, health, public works, transportation, welfare, and communications countywide.

Several cities also maintain a comparable agency with a similar mission. All have cooperated with the County in jointly developing the Santa Clara County Emergency Plan.

■ The Santa Clara County Emergency Plan

The County Office of Emergency Services (OES) is the agency responsible for preparation of the Santa Clara County Emergency Plan and all supporting documentation. The most recent edition of the Emergency Plan was adopted in May 1989, shortly before the Loma Prieta Earthquake.

The Plan's format and contents generally follow those of the state's Model Multi-Hazard Functional Plan established by the Governor's Office of Emergency Services. One objective of the state model was to consolidate all the local hazard-specific plans (flood, earthquake, hazardous materials, etc.) prepared by several different agencies throughout the county into one coherent, consistent document. The state is currently in the process of developing a similar document, the California Emergency Plan, which will include all local area plans as part of an overall state emergency response management plan.

Specific priorities for the Plan are:
- Save human lives
- Protect property
- Provide for the needs of survivors
- Provide public information
- Preserve government
- Restore essential services

The Emergency Plan is an "all-hazard" plan, designed on the premise that all kinds of emergencies share common response needs (i.e., fire suppression, law enforcement, medical attention). As such, it is structured to identify the range and degrees of probable emergency situations, the full range of emergency services which may be needed under a multitude of scenario, and the timing and coordination of emergency service delivery. In fact, the overriding goal of the plan is to identify and organize all County and city service agencies so that they may be applied effectively where and when they are needed.

The Plan also describes the circumstances which justify activation of its procedures. The County may proclaim an emergency only when a disaster or a possible disaster threatens the safety of persons or property anywhere within the county. Justifiable causes include:
- Air pollution
- Riot
- Fire
- Epidemic
- Flood
- Storm
- Earthquake
- War
- Other conditions (except a labor controversy)

LOCAL EMERGENCY RESPONSE ROLES

Responsibility for providing emergency response during or immediately following a disaster initially lie with individual jurisdictions. When a disaster is of a magnitude that is beyond the response capabilities of an individual jurisdiction, a countywide response is triggered.

As defined in the Emergency Plan, emergency response can start small and grow as need arises (fully activated, the statewide emergency management system consists of all jurisdictions throughout the state). The County will work with the cities to coordinate emergency operations within Santa Clara County; the County and the State will coordinate support for the cities.

Each city has its own emergency management system which varies from jurisdiction to jurisdiction. Most will have their own fire and police departments with the exception of Cupertino, Los Gatos, Monte Sereno, and Saratoga, all of which contract with the County Sheriff's Department and/or the County's Central Fire District for some or all of these services. Some cities also contract for emergency medical services (paramedics and ambulances) and communications dispatch.

Most city governments in Santa Clara County do not provide such emergency functions as public health, mental health, or coroner. Since County resources will be stretched very thin in a major disaster, the cities should plan to provide these services to some degree until help arrives.

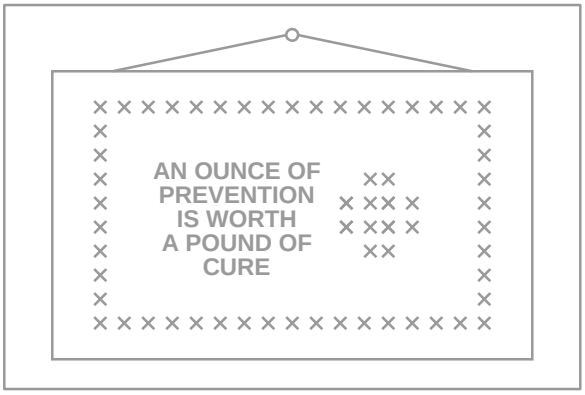
EMERGENCY PREPAREDNESS AND LAND USE

Every disaster can teach us valuable lessons about building construction, land use, and the adequacy of emergency response. Unfortunately, many of these lessons are soon forgotten, and there is a tendency to return to less stringent standards and land use practices as memories of the disaster fade. That's one reason the Federal Disaster Relief Act of 1974 requires safe land use and construction practices as a condition of receiving federal disaster aid.

There are several ways in which the General Plan may serve to reduce the threat of natural or human-caused disasters. Land use policies can keep population low in areas prone to landslides, floods, or wild fires. It can include policies which call for building standards which address earthquake safety concerns. Its policies can direct government agencies to carry out community and agency education programs, alerting citizens and staff as to what to do in the event of an emergency.

The Area Plan contains "threat summaries" for cities under contract to the County and for the other cities in the county as well. Threat summaries include maps of critical risk and areas designated as containing significant amounts of hazardous material in each of the cities. Land use planning and decision making should take these risk areas into consideration when site and construction standards are determined for uses on or adjacent to such areas.

Few industries involved with significant amounts of hazardous materials are located in the unincorporated areas of the county. It is by design that most industrial and other forms of large or complex development are placed within the cities where urban services are available. Industrial facilities in isolated areas usually have the means to take care of any potential problems on their site.



Response procedures and responsibilities in emergency situations are organized similarly at both the city and county levels. Such cooperation is not only encouraged by state and federal law, but greatly enhances the effectiveness of countywide risk management. In emergency situations, the Director of Emergency Services directs the operating departments of city or county governments, collects and disburses resources, and coordinates communications and decision making. To the extent feasible, the County, the cities and special districts should continue to search for opportunities to make local and countywide emergency response measures more effective.

Strategies, Policies and Implementation

The policies and implementation measures below are intended to help prepare us for the inevitable natural and human-caused disasters. While we can't prevent such disasters from occurring in every case, we can take steps to reduce damage and loss of life and reduce potential risks. Through emergency preparedness we can plan to quickly and effectively respond to disasters when they occur.

The policies focus and elaborate on two basic strategies:

Strategy #1: Plan for Immediate Disaster Response
Strategy #2: Plan for Post-Disaster Recovery

The policies below encourage the County and cities to take actions now which will protect public and environmental safety later and will aid in the swift restoration of law and order when disaster strikes. The recommendations are aimed at identifying specific actions which will enhance emergency planning activities and

ensuring that local governments, businesses, and the public are as prepared as possible for likely emergencies. Developing, adopting and maintaining federal and state mandated emergency response plans and procedures is fundamental to these objectives. However, we should all continue to work together to identify any additional steps that may increase our safety and minimize risks.

Strategy #1: Plan for Immediate Disaster Response

Through wise land use and development practices, people and the environment can be protected from a wide range of natural or human-caused disasters. Prudent actions in advance of these occurrences can substantially reduce the level of chaos, death and damage which might ordinarily be expected. Such actions can also minimize the period of time following a disaster before we can return to normal life.

To be successful, our efforts must involve every segment of the community; government, business, and the public. We must all know what to do when a disaster strikes.

Policies and Implementation

C-HS 17
Local governments should comply with all federal and state regulations regarding emergency planning and preparedness.

C-HS 18
Local government, business, and community organizations should cooperate in preparing the most effective emergency response plans and procedures feasible.

C-HS 19
The County and cities should comply with federal and state hazardous materials regulations and planning activities, including, the Countywide Hazardous Waste Management Plan, the Hazardous Materials Area Plan, and the Operations Section of the County Emergency Plan regarding a hazardous materials incident.

C-HS 20
All proposals to site a hazardous waste facility shall be compatible with neighboring land uses and be consistent with the permitting jurisdiction's General Plan and the Countywide Hazardous Waste Management Plan.

Implementation Recommendations

C-HS(i) 14
Develop, adopt, and maintain all federal and state mandated emergency plans and procedures.
(Implementors: County, cities and special districts)

C-HS(i) 15
Periodically carryout community and agency education programs, familiarizing citizens and staff as to what to do in the event of an emergency.
(Implementors: County, cities and special districts)

C-HS(i) 16
Ensure that critical emergency services normally provided by an outside agency will be available in each jurisdiction as needed (i.e., public health, mental health, coroner).
(Implementors: County, cities and special districts)

C-HS(i) 17
Work with local hazardous materials users to devise the most effective and economical means to implement hazardous materials management procedures.
(Implementors: County, cities and special districts)

C-HS(i) 18
Maintain accurate and up to date threat summaries for every jurisdiction.
(Implementors: County, cities and special districts)

C-HS(i) 19
Work with local businesses and farmers to ensure that the appropriate emergency response procedures are understood and that emergency equipment is available.
(Implementors: County, cities and special districts)

Strategy #2: Plan for Post-Disaster Recovery

Critical to emergency preparedness is having a plan to pull ourselves together after disaster strikes. This entails giving considerable though now to what we'll need to help ourselves get back to a normal state. All segments of the community should cooperate to ensure that, when disaster occurs, recovery is as swift as possible.

Local governments have an obligation to maintain law and order, and to quickly restore essential public services. Initially, this may have to be accomplished amid widespread destruction, damaged public infrastructure, and without any assistance from outside the county. Private industry, too, must think through the same scenario; what will be needed to resume doing business under extraordinary conditions.

Policies and Implementation

C-HS 21
Local emergency planning agencies should work to ensure continuity of government and a swift restoration of public and commercial services.

C-HS 22
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 supression, etc.).

C-HS 23
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.

Implementation Recommendations

C-HS(i) 20
Develop recovery procedures to ensure continuity of government and swift restoration of public services, including:

a. duplication and safe storage of critical public maps and other records;
b. development of alternative agency procedures which expedite public services; and
c. establishment of agreements between private and public agencies to maximize service delivery resources to the community.

(Implementors: County, cities, special districts, community service and business organizations)

C-HS(i) 21
Develop and maintain a detailed, computerized countywide GIS accessible to all emergency services personnel. (Implementors: County, cities, community service organizations and special districts)

C-HS(i) 22
Work with business organizations to assist them in developing post-disaster recovery plans.
(Implementors: County, cities, business organizations)

Noise

Summary

All citizens are entitled to a peaceful and quiet environment, free from unnecessary and annoying levels of noise. Noise has been shown to interfere with speech, sleep and mental concentration, induce stress and headaches, and disrupt overall efficiency and enjoyment of life. It is, therefore, in the public interest that the County and the cities evaluate techniques and develop policies which provide for an environment free from noise which may be hazardous to public health and well-being.

Santa Clara County and the cities should strive to ensure an environment for all residents that is free from noise that jeopardizes public health and well-being. Toward that end, the strategies focus on three areas:

- Preventing or Mitigating Unwanted Noise
- Providing Adequate Sound Buffers
- Minimizing Exposure to Airport Noise

Background

Noise is unwanted sound. The impacts of noise can be annoying and physically harmful. Exposure to intense noise may lead to irreversible hearing damage, and may induce other health problems due to stress. The effects of noise build up over time, so it is necessary to deal not only with the intensity of sound but also the duration of exposure which people have to the sound.

ACHIEVING NOISE COMPATIBILITY

The ideal is complete separation of noise sensitive uses from noise generating sources. This approach is most effective in large scale, mixed use or planned developments. Given that all types of land uses must coexist within the county's urban areas, the planning challenge is in achieving adequate noise compatibility.

For Santa Clara County, an important part of planning for a healthy and safe environment is the avoidance of unnecessary transportation-related noises. Within areas identified as being impacted by noise, it will be necessary to design projects to be compatible with the specific types of noise impacting the site.

FUTURE NOISE CHALLENGES

Noise reduction techniques can be designed and built into new construction. We will need to use these techniques and to develop new ones for addressing noise as the county matures into a community with a more urban character.

State law mandates that each community's general plan be consistent with local ALUC Plans. The most effective way to ensure consistency is to defer to ALUC policies and standards for development on or adjacent to county airports. The strategies encourage the County and cities to do so.

NOISE SOURCES – POINT AND LINE

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 of sound. As one moves away from a sound source, the sound level gradually decreases or attenuates. Aside from distance, a sound may be attenuated by objects which shield a potential receiver from unwanted sound.

Measuring Noise

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

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.

The sound indices most commonly used to describe environmental noise are the Day-Night Average Sound Level (DNL) and the Community Noise Equivalent Level (CNEL). When calculating the 24-hour average of sound in an area, these two indices respond to the community's preference for a quieter environment in the evening and nighttime hours by assigning penalties to noises which occur during those specified hours prior to calculating the average. Both indices place a 10 dB penalty on all noises occurring from 10:00 p.m. to 7:00 a.m. The CNEL calculation varies in that it also places a 5 dB penalty on noise events during evening hours (7:00 p.m. to 10:00 p.m.). The two systems yield generally similar results and are used interchangeably.

In this General Plan, noise standards are expressed as DNL levels, as recommended by the Environmental Protection Agency (EPA) for community noise planning. Santa Clara County's Airport Land Use Commission expresses its standards in terms of CNEL values, as is commonly practiced in California.

Sound is measured in decibels (dB) using a special meter. The decibel scale of sound is logarithmic. Each increase of 10 dB means that the acoustical energy is multiplied by 10 - a sound of 70 dB is 10 times as intensive as one of 60 dB. However, the relative loudness of sound as perceived by the human ear does not closely match the actual relative amounts of sound energy. For example, while 70 dB is physically 10 times as intensive as 60 dB, listeners tend to judge it as only twice as loud.

In 1974, the County conducted a survey to determine the impact of noise. It was found that the major areas affected by noise are those associated with transportation: streets, freeways, rail lines, and airports. The County has previously identified areas experiencing noise levels of 55 dB DNL or greater as "noise impact areas". Noise impact areas exist in connection with all of the identified sources.

In general, the lands not affected by transportation had readings in the 40 to 55 DNL range, with remote parks having readings in the very low range below 40 DNL. In rural areas, general noise levels are low but specific noises are often extremely annoying (i.e., blasting from quarries, shooting ranges, power boats, and off-road vehicles may disturb the serenity of an area without significantly affecting the day-long average readings of the DNL scale.)

Noises generated by transportation are by far the most significant and persistent countywide. The affected areas along freeways and near airports have been mapped by the State of California, by the County Transportation Agency, and by the ALUC. In addition, the County noise survey indicated a pattern of noise impact along several county highways.

(Maps delineating Noise Contours along significant county transportation corridors are available at the Santa Clara County Planning Office.)

STANDARDS FOR LAND USE COMPATIBILITY WITH NOISE

Two tables, the "Noise Compatibility Standards for Land Use in Santa Clara County" and the "Satisfactory Interior Noise Levels," were developed to set the levels of noise which are compatible with the performance and enjoyment of different classes of land use. The standards include both exterior and interior levels of sound.

Standards such as these should be used in the review of subdivisions, building sites, architectural and site approval permits, use permits, and zone changes in areas subject to noise impacts. Each of these standards is intended to protect the people on site from noise

coming from outside sources, and to prevent new projects from generating adverse noise levels on adjacent properties.

The Noise Compatibility Standards for exterior noise specify three classifications of compatibility between ambient noise levels at the site and various land uses: satisfactory, cautionary, and critical (see Figure). These standards serve as a preliminary analysis of potential noise incompatibility and serve to protect the proposed development from existing noise sources.

Noise studies and possible attenuation procedures will also be imposed on the project if the project itself is considered a source of incompatible noise for a nearby land use.

The noise compatibility levels are defined as follows:

- Satisfactory noise levels are those which pose no serious threat to the proposed land use. The ambient noise level at the site is compatible with the land use category of the proposed project and will not create annoyance and/or activity interference. Standard construction techniques will be adequate.
- Cautionary noise levels are those which could potentially pose a threat to the proposed land use. The ambient noise level is great enough to require study on the compatibility of the proposed project. Normal building methods may not be adequate to protect the use.
- Critical noise levels are those which probably pose a threat to the proposed land use. The ambient noise level is severe. The situation requires rigorous analysis of the compatibility of the proposed project with the ambient noise level at the site. This analysis should include both exterior and interior impacts. Simple solutions to noise attenuation may not be adequate and uses should be allowed only if they have been designed for noise reduction by a professional who is competent in sound reduction.

The standards for interior noise levels express the level above which the functioning of the allowed use would be impaired (see Figure). Noise within commercial and industrial structures is additionally regulated by the state and federal governments to protect employees from harmful noise exposure. Within residences, the occupants may impose much higher noise levels on themselves (loud stereos, etc.) so long as they do not affect their neighbors. The point of the interiors standards is to assure that people are not normally subjected to annoying or damaging noise which they can not control.

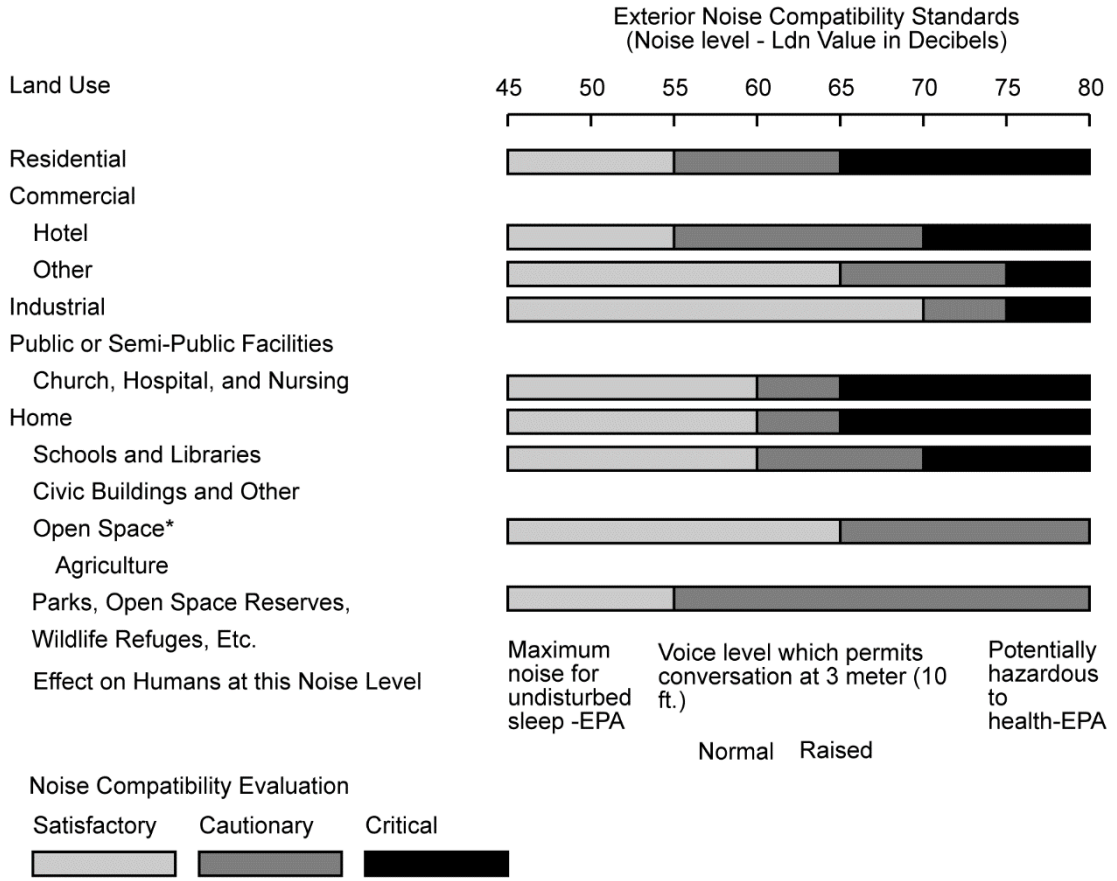
The Noise Compatibility Standards indicate that most land uses are satisfactory in noise environments of less than 55 DNL. Above 55 DNL, land uses require closer attention. The Standards indicate that noise above 65 DNL impacts residences, meaning that homes should either not be permitted or should be specially designed in such areas.

In order to use the Standards, it is necessary to define the areas of the county which are affected by noise levels of 55 DNL or higher. Within urban service areas, noise levels have been inventoried in the noise elements of the cities' general plans and the County recognizes this city data for decisions regarding all lands within urban services, incorporated and unincorporated. Within urban service areas, lands shall be considered to be impacted by noises which are within 1,000 feet of a freeway or expressway, land within the 65 CNEL area of an airport, and land near roadways where city comments on projects indicate a noise impact to exist.

ALUC PLAN AND LAND USE REGULATIONS

Ensuring compatibility between aircraft noise and various types of land uses is one of the primary functions of the Airport Land Use Commission (ALUC). The ALUC's Land Use Plan for Areas Surrounding Santa Clara County Airports (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.

Noise Compatibility Standards for Land Use in Santa Clara County



* For open space use, there are no critical noise levels listed. Homes in agricultural areas are not subject to the "Residential" standards. Public buildings in parks and open space areas shall meet noise standards as listed under "Public of Semi-Public facilities. " For open space use, theximum level of noise which a new land use may impose on neighboring open space shall be the upper limit of the "Satisfactory Noise Level."

Several types of noise are common in the vicinity of airports. Noise generated during take-off and landing operations is most commonly the focus of neighborhood concerns, but other types of aircraft-generated noise can be a problem. Planes in flight, engine “run-up”, the low frequency “rumble” of jet aircraft, or helicopter noise can be intrusive to some individuals.

The Community Noise Equivalent Level (CNEL) contours have been mapped and are used to evaluate the compatibility of various types of land uses within the noise environment surrounding the airport. These contours are also called noise zones and illustrate the reduction in acoustical energy which can be expected to occur as sound travels away from the airport.

There are however, limitations to using just the CNEL values in this case. CNEL measures noise over a 24 hour period, placing a 5 dB penalty on noises occurring from 7:00 p.m. to 10:00 p.m. and a 10 dB penalty on all noises occurring from 10:00 p.m. to 7:00 a.m. Single events may be 40 or 50 dB higher than the overall average of sounds in a given area and therefore constitute a nuisance even though the CNEL is acceptable.

The majority of complaints originating from outside of the designated noise impact areas surrounding our airports are related to single

events, rather than the overall operation of the airport. Similarly, people living further from the airport than those within the 60-65 CNEL contour may hear a lower level of sound from aircraft operations, but be more irritated by it because the sound lasts longer at their location. Weather conditions can also change where sound travels.

For this reason, Single Event Noise Exposure Levels (SENEL) may also be calculated for airports such as San Jose International Airport. The combination of the average noise environment as shown by the CNEL and the single event levels gives a better understanding of the noise environment that will be encountered by a proposed land use and, thus, provides a better basis for decision making.

SOURCES OF AIRPORT 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 Federal Airport, with a military tenant (Moffett Field).

Santa Clara County manages and operates three general aviation airports. Palo Alto Airport occupies 102 acres near San Francisco Bay in the northwestern part of the county. The airport is classified by the FAA as a Basic Utility II (B1) airport, meaning that it can service 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.

Recommended Maximum Interior Noise Levels For Intermittent Noise

Use		dBA
Residential		45
Commercial		
	Hotel-Motel	45
	Executive Offices, Conference Rooms	55
	Staff Offices	60
	Restaurant, Markets, Retail Stores	60
	Sales, Secretarial	65
	Sports Arena, Bowling Alley, etc.	75
Industrial		
	Offices (same as above)	55-60
	Laboratory	60
	Machine shop, Assembly and 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 Classroom	50
	Library	50
	Other Public Buildings	55

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 (B1) facility and occupies 179 acres.

The San Martin Airport is in San Martin, an unincorporated area between the cities of Gilroy and Morgan Hill. San Martin Airport is also a Basic Utility II (B1) airports and occupies 179 acres.

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, in over flights, and in warm-up or cool-down procedures. Noise levels produced by individual helicopter operations may be predicted using the Federal Aviation Administration's "Helicopter Noise Exposure Curves for Use in Environmental Impact Assessment" (Report No. FAA-EE-82-16), or by computer models developed by the FAA for airports (e.g., the Integrated Noise Model, or INM) and for heliports (e.g., the Heliport Noise Model, or HNM).

The noise levels associated with operations at a given heliport will depend upon flight tracks, the helicopter types used, the number of operations, and the time of day during which operations occur. Each of these aspects of heliport operation must be defined to assess the potential noise impacts upon noise-sensitive land uses.

Strategies, Policies, and Implementation

Santa Clara County and the cities should strive to ensure an environment for all residents that is free from noise that jeopardizes their health and well-being. The County and most cities already have noise ordinances in place. Many also have regulations dealing with noise from sources not subject to land use permits (i.e., barking dogs, electronic amplifiers, etc.) All of these ordinances should be enforced to the greatest extent feasible.

The State has researched the impacts of differing noise levels on a variety of land uses, as have the Federal government and local jurisdictions. Based on those studies, certain maximum standards for interior living spaces have been incorporated into State law. Standards for multifamily units are also incorporated into the Uniform Building Code (UBC). The UBC standards have been adopted by the County and all the cities.

Strategy #1: Prevent or Minimize Noise Conflicts

The ideal is a complete separation of noise sensitive uses from noise generating sources. Given that all types of land uses must coexist within the county's urban areas, the planning challenge is in achieving adequate noise compatibility. Land use planning and development review must carefully evaluate the noise producing potential of new development. Where that potential exceeds acceptable limits, steps must be taken to minimize impacts on both existing and projected surrounding uses.

Policies and Implementation

C-HS 24
Environments for all residents of Santa Clara County free from noises that jeopardize their health and well-being should be provided through measures which promote noise and land use compatibility.

C-HS 25
Noise impacts from public and private projects should be mitigated.

Implementation Recommendations

C-HS(i) 23
Project design review should assess noise impacts on surrounding land uses. (Implementors: County and cities)

C-HS(i) 24
Where necessary, construct sound walls or other noise mitigations.
(Implementors: County, cities, and public agencies.)

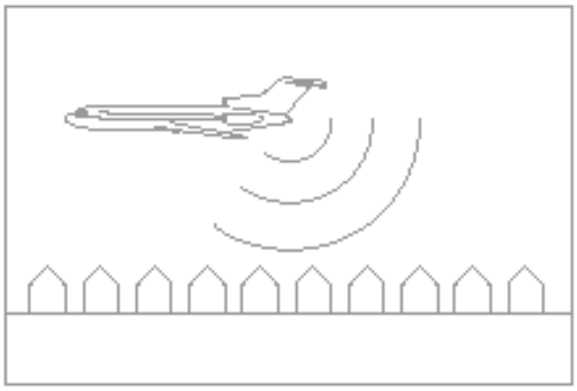
C-HS(i) 25
Prohibit construction in areas which exceed applicable interior and exterior standards, unless suitable mitigation measures can be implemented.
(Implementors: County and cities)

C-HS(i) 26
Require project-specific noise studies to assess actual and protected dB noise contours for proposed land uses likely to generate significant noise.
(Implementors: County and cities)

C-HS(i) 27
Take noise compatibility impacts into account in developing local land use plans. (Implementors: County and cities)

Strategy #2: Provide Adequate Sound Buffers

Another approach to noise compatibility is providing noise buffers between noise sources and new projects. There are many noise reduction techniques which can be built into new development. This approach is most effective in large scale, mixed use or planned developments. Such techniques include locating noise sensitive buildings away from noise sources and using the natural topography and intervening buildings to shield noise sensitive uses. There are a



number of techniques to minimize interior noise, including site planning, architectural design and construction standards, and noise barriers.

Within areas identified as being impacted by noise, it will be necessary to design projects to be compatible with the specific types of noise on the site. The best basis for this design is to plan to make the project compatible with the loudest individual noise sources that might affect the site. In the case of airports, such noise is the loudest aircraft that normally uses the airport. (The ALUC Plan has defined this sound level for each airport.) In the case of roads, the level under state law is the maximum noise set for trucks.

Policies and Implementation

C-HS 26
New development in areas of noise impact (areas subject to sound levels of 55 DNL or greater) should be approved, denied, or conditioned so as to achieve a satisfactory noise level for those who will use or occupy the facility (as defined in "Noise Compatibility Standards for Land Use" and "Maximum Interior Noise Levels For Intermittent Noise").

Implementation Recommendations

C-HS(i) 28
Incorporate acoustic site planning into the design of new development, particularly large scale, mixed use, or master planned development, through measures which may include: a. separation of noise sensitive buildings from noise generating sources; b. use of natural topography and intervening structure to shield noise sensitive land uses; and c. adequate sound proofing within the receiving structure.
(Implementors: County, cities, architects and developers)

Strategy #3: Minimize Exposure to Airport Noise

With regard to airports, the ALUC is charged with providing guidance to local jurisdictions to insure that land uses established in the vicinity of airports are compatible with the noise environment. The primary vehicle for this guidance is the ALUC Plan. In determining appropriate uses for areas adjacent to county airports, ALUC has given serious consideration to noise, particularly noise which might interfere with speech or sleep, and those noises which might lead to excessive stress.

State law mandates that each community's general plan be consistent with local ALUC Plans. The most effective way to ensure consistency is to defer to ALUC policies and standards for development on or adjacent to airports.

Policies and Implementation

C-HS 27
Land uses approved by the County and the cities shall be consistent with the adopted policies of the Santa Clara County Airport Land Use Commission Comprehensive Land Use Plans for specific airports.

Implementation Recommendations

C-HS(i) 29
Adhere to the adopted policies and standards in the Santa Clara County Airport Land Use Commission Comprehensive Land Use Plans for specific airports, when making decisions regarding land use adjacent to airports. (Implementors: County and cities)

Natural Hazards

Summary

Santa Clara County is subject to a number of significant natural hazards, including geologic and seismic hazards, extreme fire hazards, and flood hazards. To varying extents, the urban and rural environments are both impacted by the risks imposed by such phenomena. Amidst the challenges of increasing population and economic development, the primary objective of local governments where natural hazards are concerned is the protection of public safety and general welfare through the following major strategy and policy directions:

Strategy #1: Inventory Hazards and Monitor Changing Conditions
Strategy #2: Minimize the 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, If Feasible
Strategy #5: Provide Public Information Regarding Natural Hazards

Background

NATURAL HAZARDS AND THE ROLE OF LOCAL GOVERNMENTS

- **Types of Public Safety Issues Addressed in General Plans**

Protection of public safety is one of the principal, if not foremost, responsibilities of local government. The major types of natural hazards addressed in this section of the Countywide Health & Safety chapter include those which affect physical growth and development:

- geologic and seismic hazards;
- fire hazards; and
- flood hazards.

The following sections describe briefly the major aspects of each type of natural hazard listed above.

Geologic and Seismic Hazards

The most significant types of geologic hazards, or hazards of land instability, that affect the built environment are as follows:

- landslides, including rockslides and mudslides;
- expansive clays;
- peat and other highly organic soils;
- Bay muds and saturated soils;
- soil creep; and
- uncontrolled solid waste disposal sites.

These phenomena have the potential to cause major damage to building foundations, roads, and utilities. Structural failures resulting from the stresses placed upon buildings may jeopardize both life and property. Soil creep, a less familiar form of land instability, describes the tendency of expansive soils to move slowly down hillsides at unequal rates depending on moisture content, depth to bedrock and other factors. This and the other more familiar geologic phenomena are described more fully in the Rural Unincorporated Area part of the Plan.

In addition, hazards due to seismic activity, or earthquake, include:

- ground shaking;
- ground failure;
- ground displacement along faults;
- water movements due to earthquakes; and
- inundation due to dam failure.

In many cases, seismic activity which itself is insufficient to directly cause damage may trigger the occurrence of other geologic hazards, especially landslides. Structures and utilities located in areas of saturated or unconsolidated soils are also far more susceptible of damage from earthquake than otherwise. Severe earthquakes of course have the potential to damage or destroy even the most well-designed and constructed buildings, but the existence of many homes and buildings made of unreinforced masonry, structures not anchored to foundations, and structures which do not conform to current codes present the possibility of major damage even in the case of a moderately strong earthquake such as Loma Prieta, in 1989.

Fire Hazards

Much of the mountainous areas of Santa Clara County are considered “high fire hazard areas,” due to a variety of factors, including:

- climatic factors, such as rainfall and wind patterns;
- the amount of naturally-occurring “fuel” for fires, such as brush, dead trees, and grasses that ignite easily and burn hotly; and
- inaccessibility and lack of available water supplies for fire suppression.

The most recent event to demonstrate the awesome destructive potential of wildfire in high hazard areas was the Oakland Hills fire of 1991. In addition to the many fatalities, over 3,000 homes were destroyed by fires of such a magnitude they were beyond the the control of local fire-fighting capabilities. Several areas of Santa Clara County are also similarly situated, including the Lexington Hills residential area above Lexington Reservoir. Although property values may not compare with the Oakland Hills area, the fire hazard potential is similar there and in other hillside communities of Santa Clara County.

Flood Hazards

A variety of flood hazards pose a threat to public safety and property, such as:

- stormwater flooding;
- tidal flooding along the Bay; and
- inundation due to dam failure.

Tidal flooding may occur due to levee failure, and its severity may be increased in areas that have subsided due to overdrafting of groundwater basins. More importantly, stormwater flooding has been a long and continuing problem for much of the County ever since permanent settlement of the valley floor began. Much of the valley floor is flood prone

(approximately 60 out of 300 square miles), and despite extensive, sustained efforts to provide adequate flood control, nearly 300 of the County's 700 miles of streams, creeks and rivers are still incapable of carrying flows from a 1% flood. (A 1% flood is so named because it has a 1% chance of occurring each year, or once on average in 100 years. Major floods have struck recently in 1952, 1955, 1982 and 1986, among other years. The last 1% flood occurred in the Uvas Creek watershed in 1986, flooding parts of Gilroy).

In addition, the amount of urban development in flood prone areas over the last 20-30 years has also dramatically increased the estimates of potential property damage from major flooding, while the increase in the amount of impervious surfaces from development increases total stormwater runoff. For example, according to recent reports by the Santa Clara Valley Water District, two areas most threatened by flooding are the Guadalupe River area in downtown San Jose and along the San Francisquito Creek in Palo Alto. Flood waters do not have to resemble torrential flows to produce great economic losses. The damage to utilities, roads, building foundations, crops and other properties can be devastating from even a foot of standing water.

Inundation due to dam failure, on the other hand, may occur suddenly, such as in the event of an earthquake, releasing thousands of acrefeet of water with the force to create 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 structure during periods of intense precipitation. Redesign and construction to prevent overtopping, as well as enlargened spillways, are currently in progress for several dams maintained by the Santa Clara Valley Water District (SCVWD).

Maps of flood hazards updated pursuant to AB 162 are included by reference in this chapter. See the Health and Safety Chapter of Book B for additional detail and map information [pp. P-22.1-22.2].

MAJOR PUBLIC POLICY OBJECTIVES REGARDING NATURAL HAZARDS

■ Protecting Public Safety and Property

Chief among public policy objectives is of course the protection of life and property from natural hazards. Primary examples include building codes intended to increase the ability of structures to withstand earthquakes; flood control projects; and public safety agencies' capability to respond adequately to hazards when they occur.

■ Minimizing Fiscal Impacts

Of secondary importance but major significance is fiscal impact reduction. In times of fiscal strain, local governments are placed under even greater burdens by the costs of responding to major fires, floods, or earthquake-induced damages. Therefore it is important that land use policies help minimize the potential fiscal impacts of natural hazards, which are of several types:

• ongoing maintenance and repair costs, such as the costs of maintaining roads that are located in areas repeatedly impacted by landslides; • emergency response costs, such as rescue operations, fire suppression activities, equipment costs, and staff overtime costs; and • post-emergency or disaster costs, such as building inspection operations, rebuilding public infrastructure, and loss of governmental revenue from reduced sales and property tax.

CHALLENGES TO ENSURING PUBLIC SAFETY

Santa Clara County continues to grow in population and in economic development. Property values, as in much of urban California, are comparatively high, and accordingly, so are the costs to individuals, insurance providers, and local governments of property damage due to natural hazards. A major challenge for the future will be to accommodate growth in such a way that minimizes the threats posed by the many significant natural hazards to which Santa Clara County is subject.

Another challenge is public perception of the threats posed by natural hazards. Immediately following an occurrence of flood or earthquake, public awareness and concern is very high, but tends to diminish over time until the next occurrence. In addition, the irregularity and undpredictability of many phenomena increase the public's complacency. Given the financial costs of being adequately prepared for natural hazards and responding to them, lack of public awareness and support for projects to increase safety, such as bridge and highway improvements, flood control projects, and land use policy, can be a major impediment to ensuring public safety.

In the final analysis, some threats are unavoidable, such as earthquakes. However, that doesn't mean that it is acceptable to allow structures to be built on fault traces, or that buildings and overpasses shouldn't be designed to withstand earthquakes to the maximum extent possible. To the contrary, it becomes even more important to develop strategies and policies which avoid and minimize unnecessary risks and which better prepare Santa Clara County for those which are unavoidable.

Strategies, Policies and Implementation

On a countywide basis, the following set of strategies should be employed to protect the public from natural hazards:

Strategy #1: Inventory Hazards and Monitor Changing Conditions
Strategy #2: Minimize the 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, If Feasible
Strategy #5: Provide Public Information Regarding Natural Hazards

➔ ***Policies and Implementation***

C-HS 28
Countywide strategies for reducing the threat of natural hazards to life and property should include:

a. Inventory hazards and monitor changing conditions.
b. Minimize the resident population within high hazard areas.
c. Design, locate and regulate development to avoid or withstand hazards.
d. Reduce the magnitude of the hazard, if feasible.
e. Provide public information regarding natural hazards.

Strategy #1: Inventory Hazards and Monitor Changing Conditions

Adequate documentation of natural hazard areas such as flood plains, landslide areas, fault traces, and high fire hazard areas is essential for purposes of determining the appropriate densities for general areas and for determining placement of structures such as schools, landfills, and hazardous materials storage facilities.

As new landslide areas and faults are discovered, or as other conditions change, inventories used by local jurisdictions should be updated to provide an adequate basis for decision-making.

➔ ***Policies and Implementation***

C-HS 29
Inventories and mapping of natural hazards should be adequately maintained for use in planning and decision-making.

Strategy #2: Minimize the Resident Population Within High Hazard Areas

The various types of natural hazards addressed in this section are encountered throughout Santa Clara County and must be accounted for in all jurisdictions' land use planning. In addition to the steepness of slopes characteristic of many mountainous areas of the County, these phenomena render much of the non-valley lands unsuitable for urban development. Many valley areas of South County, including Coyote Valley, the San Martin area, and much of Gilroy, are also very vulnerable to flood hazards, as well. To the maximum extent possible, allowable uses and densities in such areas should reflect the constraints imposed by natural hazards, minimizing the resident population within high hazard areas.

The current joint urban service area policies of Santa Clara County incorporate these principles by generally excluding from cities' USAs lands unsuited for urban development. Only areas which can be reasonably served by public safety agencies and urban infrastructure should be considered suitable for development. High hazard areas not only pose greater risks to life and private property, but also impose higher initial urban infrastructure costs for roads, sewers and other utilities.

Furthermore, the costs of maintaining and repairing infrastructure in areas of steep slopes, geologic instability, and other hazards are significantly increased compared to valley lands. Limited accessibility of hillside areas, which radically increases emergency response times, together with landslide and other hazard potential, make development in such areas extremely inefficient to provide urban services. For those reasons, existing USA boundaries are generally not extended to areas above 15% average slope.

Outside cities' USAs, the County's development policies allow for uses and densities which minimize the resident population within high hazard areas and help minimize the risk of natural hazards to those who do reside there.

Policies and Implementation

C-HS 30
Local jurisdictions' urban development and land use policies should minimize the resident population within areas subject to high natural hazards in order to reduce

a. the overall risk to life and property; and
b. the cost to the general public of providing urban services and infrastructure to urban development.

C-HS 31
Cities should not expand Urban Service Areas into undeveloped areas of significant hazards.

C-HS 32
Areas of significant natural hazards shall be designated in the County's General Plan as Resource Conservation Areas with low development densities in order to minimize public exposure to avoidable risks.

Implementation Recommendations

C-HS(i) 30
Continued adherence to joint urban development policies and exclusion of areas unsuited for urban development from cities' Urban Service Areas.

C-HS(i) 31
Outside cities' USAs, maintain current County policies which allow only for low density and low intensity land uses in areas of significant natural hazards.

Strategy #3: Design, Locate and Regulate Development to Avoid or Withstand Hazards

Development which does occur in areas subject to natural hazards must be designed, constructed, and maintained to reduce the threat of hazards to occupants as well as to the community. Given that some development will inevitably occur in hazard prone areas, it is critical that public policy advance the following principles, or objectives:

1. *Development by individuals and by public agencies should not be allowed to impose increased risks upon neighboring properties and the community at large.*

   The two following examples illustrate the potential dangers involved. Building in flood ways and flood plains without adequate planning has potential to both increase flows downstream during flooding, and should structures or parts of structures be carried downstream by floodwaters, the potential to damage other structures is significantly increased. Secondly, placement of septic system leachfields and drainage systems for upland developments may increase saturation of soils downhill, increasing landslide potential for neighboring properties. To the maximum extent possible, such problems should be minimized through controls upon development, both private and public.

2. *No individual should be exposed unnecessarily to increased risk due to inadequate assessment or development review by a public agency.*

   For example, although the original occupant of a dwelling in a high hazard area may fully accept the risks and costs of having built there, future residents must generally rely on local government agencies having done everything possible to ensure the safety of the structure and property.

Other examples include stringent engineering standards for dwellings in areas of soil instability, mandatory sprinkler systems and fire retardent materials for new development in extreme fire hazard areas to compensate for limited accessibility, and maintaining vegetation clearances around structures in fire hazard areas to further minimize risks of fire spreading easily from surrounding vegetation. These examples demonstrate the variety of means available to achieve public safety while still accommodating a certain amount of development in areas of natural hazards.

Policies and Implementation

C-HS 33
Development in areas of natural hazards should be designed, located, and otherwise regulated to reduce associated risks, by regulating the type, density, and placement of development where it will not:
a. be directly jeopardized by hazards;
b. increase hazard potential; and
c. increase risks to neighboring properties.

Strategy #4: Reduce the Magnitude of the Hazard, If Feasible

In some cases, it may be possible to reduce the magnitude of the hazard through measures not specific to individual developments. Perhaps the most prominent example is flood control engineering. As urbanization has increased over much of the Santa Clara Valley, particularly north of the Coyote narrows, flood control projects such as deepening waterways and straightening channels have been employed to increase the capacity of local drainage systems and reduce the potential risk from flooding. Levees along the baylands are used to protect low-lying lands adjacent to the Bay. The Santa Clara Valley Water District (SCVWD) is the principal governmental entity responsible for planning, developing, and maintaining the county's system of flood control improvements.

Two major concerns of the SCVWD involve:

- the amount of ongoing hillside development in Santa Clara County, which impacts flood control capability downstream in urban areas, and
- the overall amount of development in rural unincorporated areas lacking adequate drainage facilities, which has potential to overwhelm the capacity of planned flood control improvements both in the area and downstream.

Flood control improvements are predicated upon a given or projected amount of development in both urban or rural areas, and if development exceeds projections, flood control capacity is rendered inadequate. Costs to the general public are increased if additional improvements are necessitated.

A major disadvantage, however, of flood control engineering has been the elimination of riparian habitat and vegetation. More emphasis is now being given to the concepts of combining flood control and riparian restoration, while also providing for recreation and beautification. One example of a flood control technique which incorporates these concepts is the "modified flood plain." Parts of the Guadalupe River Corridor project incorporate this technique to combine flood control, linear parks, access to the waterway, and retainment of riparian vegetation to the greatest extent possible.

Other types of measures not specifically related to individual development projects that are intended to reduce the risks of natural hazards include controlled burning of undeveloped areas and dam reinforcement. Controlled burning reduces the amount of fuel available to wildfires, but it is becoming impractical in Santa Clara County due to the amount of scattered rural development. However, dam reinforcement is important to both an assured water supply and to protect the safety of populations and property downstream of the water impoundments.

➔ ***Policies and Implementation***

C-HS 34
Flood control measures should be considered part of an overall community improvement program and advance the following goals, in addition to flood control:

a. resource conservation;
b. preservation of riparian vegetation and habitat;
c. recreation; and
d. scenic preservation of the county's streams and creeks.

Implementation Recommendations

C-HS(i) 32
Continue efforts by, and joint planning with, the Santa Clara Valley Water District to design and construct flood control improvements that achieve a desirable balance of resource conservation, flood control and recreational objectives.

Strategy #5:
Provide Public Information Regarding Natural Hazards

As a public service of vital importance, local governments and public safety agencies should strive to maintain public awareness of the threat of natural hazards. This service may be accomplished through information publications, emergency preparedness events, involvement of local media, and through the system of public education. Many of the activities which best protect the public must be the responsibility of individuals, such preparing ones' home in the event of major earthquake; however, it is also important that the general public understand and support the need for infrastructure improvements, emergency response capability, and land use planning, measures which have either have significant financial costs or impose restrictions upon the use of private property in order to help ensure public safety and welfare.

Policies and Implementation

C-HS 35
Information about the prevalence and threats of natural hazards shall be provided to the public to maintain general awareness and support for governmental actions needed to improve public safety.

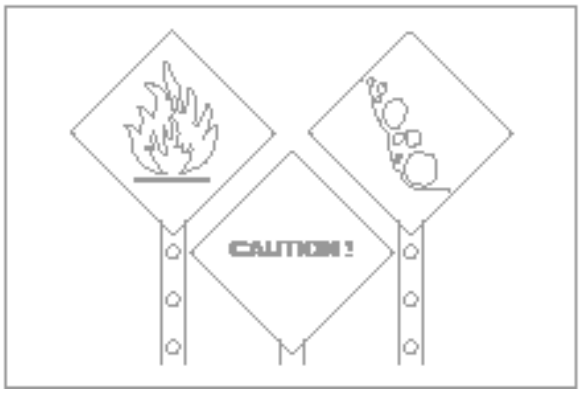
Implementation Recommendations

C-HS(i) 33
Dissemination of publications informing the public of the need for preparedness.

C-HS(i) 34
Programs in local media and public education system to heighten awareness.

C-HS(i) 35
Publicity for public safety agency responsibilities and programs such as emergency response drills.

NOTE: For more detailed policies and implementation recommendations applicable to Rural Unincorporated Areas, refer the Rural Unincorporated Area Issues & Policies portion of the General Plan.



Aviation Safety

Summary

Aviation for both commercial and general civilian purposes is important to the economy and general public of Santa Clara County. In accordance with fundamental goals and principles of Comprehensive Land Use Plans for the county's airports, the County's General Plan outlines the following general approaches to provide the maximum safety to aircraft and populations in the vicinity of airports:

Strategy #1: Limit Population Densities and Land Uses within Designated Safety Zones
Strategy #2: Regulate Structures and Objects Hazardous or Distracting to Air Navigation

Local jurisdictions' general plans and development proposals must be consistent with ALUC Comprehensive Land Use Plans and recommendations unless specifically overridden by a two-thirds vote of the legislative body.

Background

AIRPORTS IN SANTA CLARA COUNTY

There are five airports in Santa Clara County:
- San Jose International Airport, the only major commercial facility;
- Moffett Field Federal Airport; and
- three civilian airports for general aviation, Palo Alto, Reid-Hillview in east San Jose, and San Martin Airport (formerly South County Airport).

(See Map)

Each is important to the economy of Santa Clara County and to the general population, whether it functions as a major commercial hub, or provides primarily for recreational aviation.

Although aviation is a relatively safe mode of travel, especially commercial aviation, accidents do occur, threatening the safety of travelers and the population on the ground. However, aviation accidents tend to occur in predictable patterns, which makes it possible to afford a greater measure of safety to the general public through protective land use planning.

MAJOR TYPES OF AVIATION HAZARDS

Most aviation accidents are the result of adverse meteorological conditions, pilot error, and/ or mechanical failures. The principal types of accidents occur for the most part:

- on approach and landing;
- upon takeoff and immediately thereafter; and
- in a pattern clustered along the center line of the runway, whether in takeoff or landing.

Accidents in mid-air during other phases of air travel are far less common.

THE ROLE OF THE AIRPORT LAND USE COMMISSION (ALUC) PLAN

Airport Land Use Commissions, or the ALUCs, were established by state legislation in 1970 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."

The General Plan Land Use elements for all jurisdictions with airports must be consistent with the adopted ALUC Plans for land use surrounding airports. The principal approaches to increase aviation safety employed by ALUC plans involve:

- limiting population densities and types of land uses in designated safety zones extending from each end of a runway; and
- regulating the height of structures or objects which could pose hazards to air navigation, especially those in the direct flight path of aircraft.

Other regulatory authority of the ALUC involves minimizing potential distractions to pilots, such as sources of light or glare, and limitations on above-ground storage of hazardous materials.

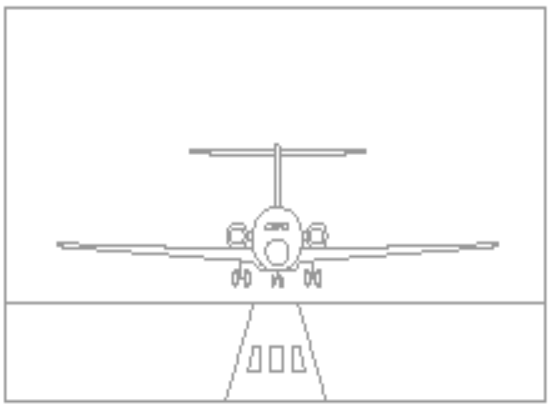
Although the ALUC reviews land use and development of each affected jurisdiction within the "influence boundaries" for conformity with ALUC policies, recommendations to the jurisdictions have only advisory authority. If a jurisdiction wishes to "override" the decision of the ALUC, it may do so only with a two-thirds vote of its legislative body.

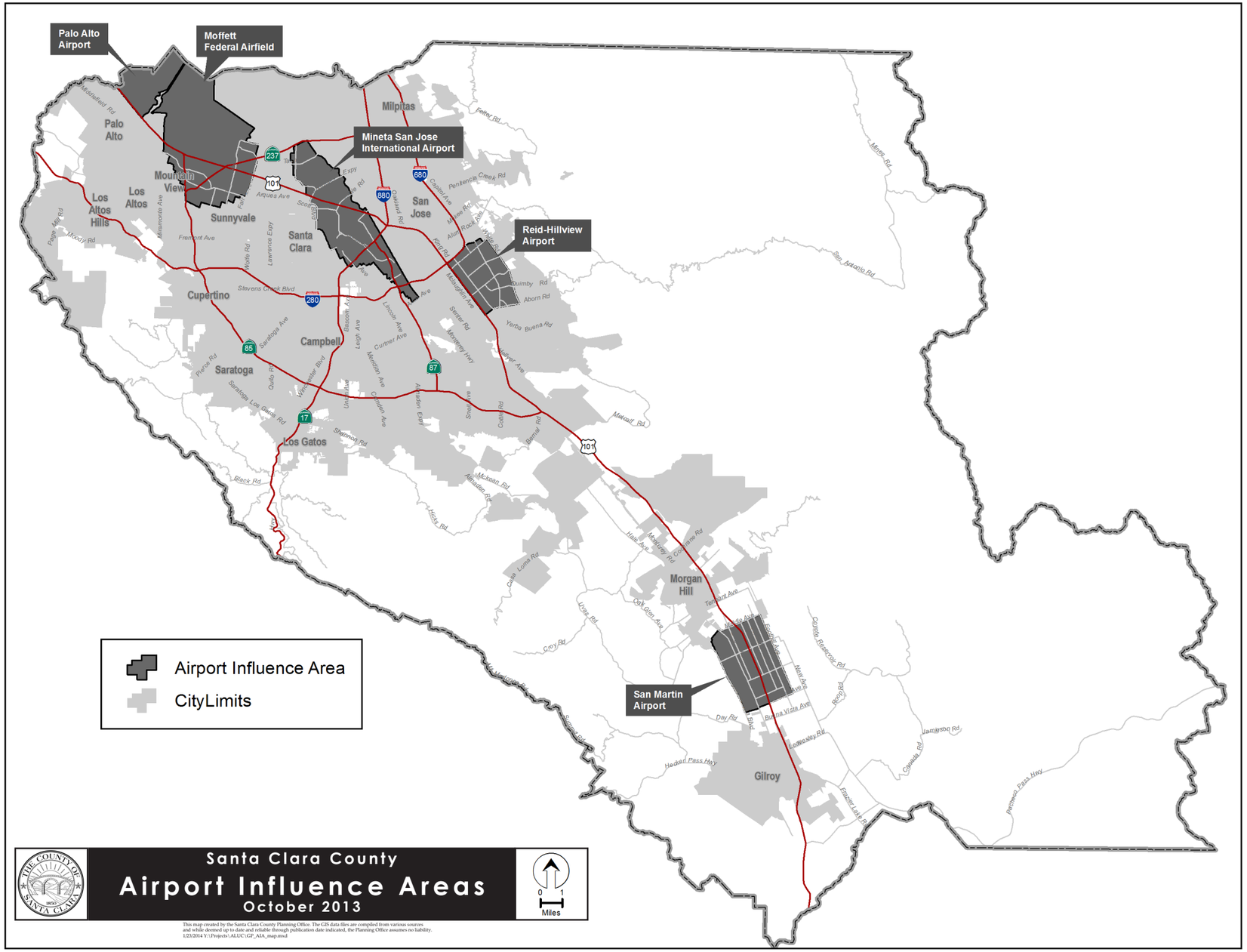
Strategies, Policies, and Implementation

As outlined in the ALUC Comprehensive Land Use Plans, the general approaches to minimizing aviation hazards include the following strategies:

Strategy #1: Limit Population Densities and Land Uses within Designated Safety Zones

Strategy #2: Regulate Structures and Objects Hazardous or Distracting to Air Navigation





This map created by the Santa Clara County Planning Office. The GIS data files are compiled from various sources and while deemed up to date and reliable through publication date indicated, the Planning Office assumes no liability.
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Santa Clara County
Airport Land Use Commission

PUC Section 21675 requires the Airport Land Use Commission (ALUC) to formulate and maintain a comprehensive land use plan (CLUP) for the area surrounding each public-use airport within Santa Clara County. A CLUP may also be developed for a military airport at the discretion of the ALUC. The CLUPs provide policies for safety, height and noise for land uses surrounding Santa Clara County airports. The County has four public-use airports, San Jose International, Palo Alto Airport, Reid-Hillview Airport and South County Airport, and one federally owned airport used by the Department of the Navy, Moffett Federal Airfield. Moffett Federal Airfield is defined as an Air Carrier Airport for the purposes of a CLUP due to the type of aircraft that use this airport.

The California State Aeronautics Act {Public Utilities Code: Division 9, Part 1, Chapter 4, Article 3.5, Section 21670 et seq} places the responsibility for implementing and enforcing Comprehensive Land Use Plans (CLUP's) on the local governmental agencies responsible for land use planning within each airport's Airport Influence Area (AIA). Once the ALUC has adopted or revised a CLUP, and transmitted that CLUP to an affected local agency, the local agency is mandated to incorporate the CLUP's provisions into its General and/or Specific Plan(s) within 180 days {Government Code 65302.3(b)}. Implicitly, the local agency is then encouraged to adopt zoning ordinance(s) that implement the policies of their General/Specific Plan(s).

Effective January 2013, the ALUC has adopted airport – specific CLUPs for all airports / airfield in Santa Clara County. The County has included the relevant policies of the CLUP's by reference into the Health and Safety chapters of the General Plan. South County Airport and Moffett Field are located in unincorporated land.

Policies and Implementation

C-HS 36
General strategies for airport safety in Santa Clara County include the following:
a. Limit population densities and land uses within designated safety zones.
b. Regulate structures and objects which could be hazardous or distracting to air navigation.

Strategy #1: Limit Population Densities and Land Use Within Designated Safety Zones

Limiting the number of people exposed to typical aviation accidents is the primary objective of the first strategy. The larger the zone designated for limited population and land uses the greater the degree of protection. In fact, ALUC-established safety zones extend beyond the areas required by FAA regulations, not only to protect aircraft on approach and departure, but to provide maximum protection to ground populations.

Low density land uses, such as agricultural lands, parks, storage areas, parking lots, singlestory warehousing, and similar uses are those generally allowed the highest risk safety zones.

Policies and Implementation

C-HS 37
Land use plans and development proposals within the "influence boundaries" of affected jurisdictions should be consistent with ALUC land use plans for airport safety.

Strategy #2: Regulate Structures and Objects Hazardous or Distracting to Air Navigation

Ensuring that aircraft have a safe space in which to operate in and that persons occupying nearby structures are equally protected are the primary objectives of the second strategy. To that end, height restrictions are imposed in areas surrounding airports affected by takeoff and landing. These restrictions provide an extra margin of safety and minimize potential distractions to pilots. The ALUC-established restrictions are based on FAA regulations, referred to as the FAA FAR Part 77 Surfaces, which are included in each of the airport-specific CLUPs.

Other types of land uses that may be regulated are those which could result in significant distraction or confusion of pilots. These include land uses that may create reflections, glare, dust or steam, hazardous lighting, electrical interference, attract large flocks of birds, or other visibility-reducing or distracting phenomena.

Policies and Implementation

C-HS 38
Local jurisdictions should comply with ALUC height restrictions and other regulations intended to ensure operational safety of aircraft and the safety of those occupying nearby buildings.

C-HS 39
Land uses, structures, and objects which could distract, confuse, or otherwise contribute to pilot error should not be allowed within the vicinity of airport operations.

Waste Water Disposal

Summary

The water resources of Santa Clara County constitute a special wealth giving county residents a measure of independence in supplying our basic water needs. In this regard, the long-term viability of the county's watersheds and the aquifers which lie under the Santa Clara, Coyote, and Llagas Valleys are critical to the social, environmental and economic well-being of Santa Clara County residents. Adequately protecting the quality of our groundwater as the county grows will be a complex and on-going task.

Several chapters in the General Plan include development policies intended to protect those watersheds and aquifers. The strategies in this section focus on maintaining a safe and clean supply of water by preventing its contamination with wastewater from a wide range of users.

Strategy #1: Prevent Waste Water Contamination of Groundwater Supplies
Strategy #2: Monitor Groundwater Quality

A SHARED RESPONSIBILITY

Maintaining the integrity of local groundwater systems, including the watersheds, aquifers and groundwater basins, is a shared responsibility between the County, the cities, the SCVWD, and water purveyors countywide.

GROUNDWATER PROTECTION IN UNINCORPORATED AREAS

The integrity of groundwater systems is a countywide concern. The County identifies the protection of groundwater aquifers as major issue in rural, unincorporated area development. Interested readers should refer to the Health and Safety Chapter: Rural Area Issues and Policies for a broader discussion of County strategies to protect groundwater in the rural, unincorporated areas.

Background

Santa Clara County is a major urban center set in, generally, a semi-arid region. Securing and storing enough water to meet our needs has historically been a major challenge to the county and will continue to be in future.

Although we are able to meet much of our water needs through local supplies, the county has long since passed the point where it could meet all its water needs locally. Maintaining the integrity of the county's groundwater supply is fundamental to ensuring a reliable and adequate supply of safe drinking water.

AQUIFERS—A VITAL PART OF WATER STORAGE AND CONVEYANCE

About half of all the water used in Santa Clara County originates elsewhere in the state, in northern and eastern California rivers. The other half of the county's water supply comes from wells that pump it up from deep under the ground.

This water is found in aquifers, which are gravel and sand formations found between large deposits of clay. Water gets into the deep aquifers after it percolates down through the soil and upper aquifers. This entire area is called the groundwater basin.

Even though a large portion of our water originates outside the county, most of it is delivered via the underground aquifers. After being pumped into the county through pipelines, most of the water is emptied into local reservoirs from which it is gradually released into area waterways and percolation ponds. From there it seeps down into the aquifer to be raised at pumping stations throughout the county by local water service agencies. The aquifers are more than natural "storage tanks," they are also natural "pipelines" and critical to distributing water countywide.

GROUNDWATER INTEGRITY

The integrity of our groundwater system and the water it carries to us can be compromised in several ways. First, overdrafting or pumping more water up from the aquifers than is being recharged can lead to land surface subsidence. This happens after great amounts of water are removed from the water-bearing strata. The layers of clay which separate the water-bearing strata compress tiny particles together that were held apart by the water. Once land compresses it can never be restored and the water-retention capacity of the aquifer is lost.

The second means by which groundwater integrity can be compromised is through direct pollution. When hazardous materials, toxic chemicals and farm wastes are spilled, either on the ground or from leaking underground tanks, the substance can seep down into the aquifer. This has occurred in the past and can still occur through accidental spillage. The County and cities have implemented policies and management programs to guard against the likelihood that such spills will occur. All local jurisdictions are prepared to institute emergency response procedures to contain and cleanup spills should they occur.

Finally, groundwater systems can be impacted when development served by on-site wastewater treatment systems results in the introduction of more pollutants to the ground than the natural cleansing quality of soil can remove before wastewater reaches the aquifer.

The first avenue, overdrafting and subsidence, are addressed in the Resource Conservation Chapter of the General Plan. Hazardous materials regulation is in the Hazardous Materials Section of this Chapter. The last, wastewater pollution, is the focus this section.

WASTEWATER MANAGEMENT ADEQUATE TO NEED

Wastewater disposal within most of the urban areas of the county is handled through sewers which lead to municipal wastewater treatment facilities, while in the rural areas wastewater disposal is primarily accomplished with on-site wastewater treatment systems (i.e., systems which rely on gravity and natural cleansing action by soil). Each of these systems raise different planning issues and challenges.

Most of the sewer plants serving the urban portions of the county have been upgraded and expanded during the past decade in response to new state and federal water quality requirements. Most existing facilities were initially constructed in years past when there was comparably more funding available for such costly public works projects. Today, the sources of those funds have either been eliminated or greatly reduced at all levels of government. Funding the expansion and maintenance of wastewater management systems is likely to remain a major challenge for the foreseeable future.

Strategies, Policies, and Implementation

If implemented, the strategies and policies below are aimed at maintaining the long-term integrity of the county's aquifers and groundwater supply. First, by focusing urban development in areas served by sophisticated centralized wastewater treatment facilities and by limiting the amount of development served by on-site wastewater treatment systems elsewhere, the policies seek to keep contaminants from ever entering the groundwater basins.

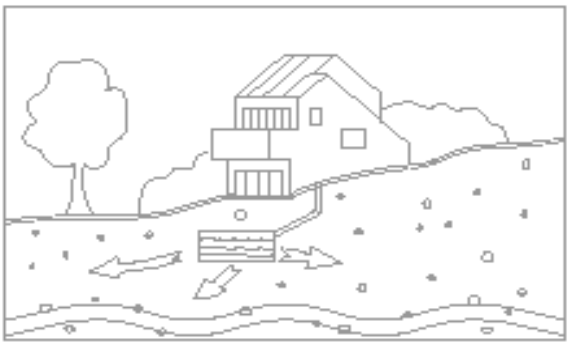
Secondly, through ongoing countywide monitoring programs, contaminants and their sources can be identified early on and steps taken to eliminate or minimize their impact on water quality.

Strategy #1: Prevent Waste Water Contamination of Groundwater Supplies

This strategy encourages the County and cities to do their utmost to prevent wastewater contamination of groundwater supplies. In the urban areas, this will be achieved principally through the maintenance of existing and future wastewater treatment facilities.

As the county grows, the County and cities must cooperate in planning for future facility expansion adequate to accommodate that growth or regulate growth to levels which can be adequately served by existing facilities. Expansion programs will likely require a search for resources to finance these costly public works projects. Success in such an endeavor would clearly be enhanced through joint effort.

In the rural areas, this strategy implies limitations on urban development in areas not served by municipal wastewater treatment facilities and limits on other development to ensure that onsite wastewater treatment systems serving those areas do not exceed the capacity of the natural cleansing mechanism of the soil to capture contaminants before they reach our water supply. This effort will be greatly enhanced by adherence to the highest on-site wastewater treatment system construction and maintenance standards.



Policies and Implementation

C-HS 42
The long-term viability and safety of underground aquifers and groundwater systems countywide shall be protected to highest degree feasible.

C-HS 43
Urban land uses should be in cities and served by centralized wastewater treatment systems.

C-HS 44
All new on-site wastewater treatment systems should be located only in areas where:

a. there is reasonable assurance that they will function well over a long period;
b. they can be designed to have a minimum negative impact on the environment; and
c. they will not contaminate wells, groundwater or surface water.

C-HS 45
On-site wastewater treatment systems should not be allowed in areas where soil characteristics impede their operation (e.g., areas of high groundwater conditions, areas with saturated soils, areas with limited depth to bedrock, etc.).

C-HS 46
Hazardous materials, whether commercial, industrial, agricultural, or residential in character, should not be disposed of in any wastewater or on-site wastewater treatment system.

Implementation Recommendations

C-HS(i) 42
Develop and implement standards for land subdivision and development which must rely on using on-site wastewater treatment systems so as to minimize negative environmental impacts and maximize the useful life of such systems. (Implementors: County and cities.)

C-HS(i) 43
Prevent overdevelopment requiring on-site wastewater treatment systems in areas where groundwater quality has been so impacted as to pose a discernible threat to the long term integrity and safety of underground water supplies.
(Impl.: County & cities.)

Strategy #2: Monitor Groundwater Quality

On-going programs to monitor groundwater quality will enhance the likelihood that contaminants will be identified before they enter the aquifers. It will also enable local governments to identify the source of those contaminants and take steps to mitigate them.

Monitoring long-term groundwater quality will enable the County and cities to implement programs to protect and enhance water quality in areas threatened by pollution. Understanding the source or cause of water contamination may also enable local officials to design effective remediation methods to restore groundwater sources which have been compromised.

Policies and Implementation

C-HS 47
Groundwater quality should be monitored to ensure the long-term integrity of countywide water resources.

Implementation Recommendations

C-HS(i) 44
Monitor the groundwater quality throughout the county to insure the long-term integrity of the aquifers and the safety of water supplies to all users.
(Implementors: County and Cities.)

C-HS(i) 45
Maintain low cost laboratory access for well water testing.
(Implementors: County and Cities.)

Governance

Countywide Issues and Policies

Summary J-1

Background J-1

Strategies, Policies and Implementation J-6

Strategy #1: Create an Effective Countywide Planning Organization J-6

Strategy #2: Reform Local Government Finance to Encourage Balanced Land Use J-10

Summary

Most of the major problems facing Santa Clara County, such as high housing prices, traffic congestion, and air pollution, are to some degree the result of the cumulative impacts of individual planning and development decisions made by our fifteen cities acting alone in what they each consider to be in the best interests of their individual communities. Unfortunately, the cumulative, countywide impacts of these well-intentioned individual decisions often have negative consequences for the county as a whole.

Thus, for example, when individual cities fail to provide for sufficient housing within their boundaries to house the number of workers who work in the businesses and office parks they have approved, the cost of housing is driven up and many of these workers need to find housing elsewhere, often at great distances, where their daily commutes contribute to traffic congestion, air pollution, and unnecessary energy consumption, and reduce the amount of leisure time they have available to spend with their families and contribute to the betterment of their communities.

The failure of cities to take into account the cumulative countywide impacts of their individual decisions is largely the result of two basic factors: 1) the lack of an enforceable comprehensive countywide plan that reflects the needs and goals of the entire county; and 2) the system by which we currently finance local governments in California that tends to penalize cities that plan for balanced land use and reward those that don't.

Both of these factors need to be addressed if we are to be successful in maintaining and enhancing our overall quality of life, the health of our local economy, and the social well-being of our communities. This chapter builds on the discussion of countywide comprehensive planning developed in the Growth and Development Chapter. Whereas that chapter recommended that a countywide comprehensive plan be developed, this chapter takes that idea one or two steps further. It proposes two strategies for moderating the cumulative impacts of locally based planning decisions. First, it proposes that a multi-function countywide planning organization be created that would have the authority to not only develop, but also implement a countywide plan. Second, it proposes changes in local government finance that would enable the cities and the county to depend less on fiscal zoning in order to meet their revenue needs.

Background

COMPREHENSIVE COUNTYWIDE PLANNING

■ Fragmented Planning

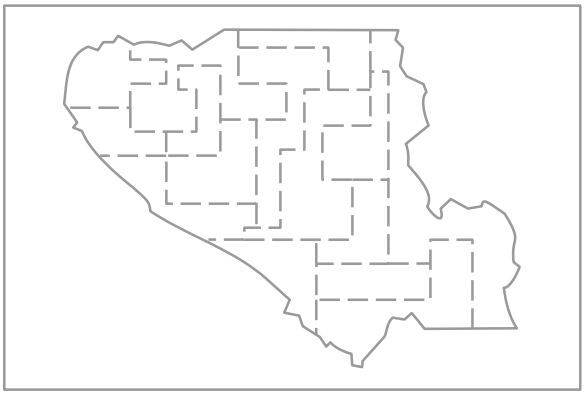
The Growth and Development Chapter of this plan outlined three fundamental strategies for managing and accommodating growth. Generally, these strategies consist of promoting compact urban form and development; achieving more balanced urban growth and development; and, improving coordinated, countywide planning. As stated in that chapter, planning and land use authority is fragmented among the cities, the County and numerous special districts. This fragmentation limits the county's ability to address problems that transcend individual jurisdictional boundaries.

Some of the problems that should be addressed at the countywide level are housing supply and affordability, maintaining regional mobility, air quality, providing community services, and countywide economic development. That chapter describes the rationale for improved coordination and countywide planning. It also suggests possible sources and components of a countywide plan as well as possible means of implementing the plan. The Governance Chapter builds on the Growth and Development Chapter and focuses more on the creation of an effective comprehensive countywide planning organization.

The problems leading to the need for countywide planning are a result of decision makers within local regulating agencies often not considering the regional impacts, such as housing prices, traffic congestion and deteriorating air quality, of their locally-oriented decisions. In addition, local decision-makers often negatively impact the region by denying regionally beneficial uses such as affordable or higher density housing, regional transportation systems, child care and waste management facilities, thereby forcing such facilities to be located in inappropriate areas or not at all.

In either case, local government is either unwilling or unable to deal adequately with growth issues that cannot be addressed by individual jurisdictions acting alone. As a result, there is a mismatch between the jurisdiction which controls development and the jurisdiction(s) which either benefit or are negatively impacted by a particular development proposal. A piecemeal approach to solving problems that are inextricably entwined is ineffective.

The most effective approach is to provide a framework in which all entities affected by the issues take an active role in addressing projects of regional significance. A countywide planning organization with authority to prepare and implement a countywide plan would help accommodate certain types of growth, especially affordable housing and major public facilities and protect the environment, especially environments of critical importance to the region.



There is, as yet, no permanent mechanism in place to encourage cities and the county to consider, in an on-going systematic way, the plans and policies of adjoining jurisdictions or the entire sub-region when deliberating on local issues that have regional impacts and to mediate any inconsistencies that arise. Nor does there exist at the countywide level, a commonly held vision of the future. As a result, the cities and the county act independently, without guidance of a commonly held set of values, visions, or policies.

■ The State's Role

Based on the experience of states and regions across the United States, successful countywide planning requires the support of state government. This support is necessary in order to motivate local governments to look beyond their own boundaries when assessing the merits of local land use decisions and to address local land use issues from a regional perspective.

There are at least ten states that have statewide comprehensive planning, including Oregon, New Jersey, Florida and Vermont. Each state has implemented state-mandated planning in different ways. For some, the state has the authority to preempt local authority or repeal power over local decisions dealing with developments of regional significance (morethan- local significance.) For others, local agencies must integrate state goals and standards into their local plans. In these cases, local plan conformance is assured through mandates and penalties. In some, states use only incentives to influence compliance of local plans with state goals and standards.

State support of regional or countywide planning in states across the nation has several components in common. These components are:

- a set of statewide policies with which regions should be consistent;
- state enabling legislation or state legislation mandating regional or countywide planning (In California, congestion management planning is the most recent example of this. However, this is narrowly focused.);

- the preparation of comprehensive plans at the local level that are reviewed and possibly approved by either a regional or state agency;
- a system of incentives and disincentives to motivate local governments to develop policies consistent with the regional or statewide plans (using the CMP as an example, cities are eligible for state gas tax subventions IF their policies are consistent with the CMP — a significant incentive. Likewise, cities and employers found not to be in compliance with the Air Quality District's plan are fined — a major disincentive.);
- limits on the number and timing of plan amendments; and
- periodic plan updating.

With only voluntary involvement on the part of the cities and the county, major controversies will not be resolved without major threat to the existence of the planning organization. Cities participating in a voluntary manner will tend to drop out of the organization when they see that possible decisions will not benefit their individual city. Building countywide plans for which there is countywide consensus, requires the on-going involvement of all those affected. State authority of some form, whether through mandates or through a system of incentives and disincentives is critical to the continuation of the countywide planning function.

In response to the deleterious spillover effects from land use decisions that have significant regional impact, as well as the increasing difficulty in siting regionally beneficial uses, the state and federal governments are mandating more countywide and regional planning, especially in the areas of congestion management, solid waste management, hazardous waste management, airport land use, and air and water quality. Many of the state's leaders are coming to agreement about the need for regional approaches, for more efficient transportation systems, for compact growth, and for specially targeted affordable housing programs. Legislation to either enable or mandate regional and subregional planning is being considered.

Reaching consensus now about the need for and ultimately the structure of countywide planning within Santa Clara County will assure that it will be well-suited to the specific needs of this county. Santa Clara County has a long-held tradition of leading the way in a number of issues (see sidebar on Past and Present Countywide Planning Activities). Beginning now to address the issue of countywide planning will be consistent with that tradition.

GOVERNMENT FINANCE

■ Counterproductive Local R evenue System

The regional or countywide planning and intergovernmental cooperation required to solve countywide or region-wide problems will not be successful without changes in local government finance.

The existing local revenue system is counterproductive in that it unwittingly encourages cities to promote commercial and industrial development while minimizing residential development. Industrial and commercial development generate far more revenue on a net basis than does housing. Both land uses have countywide benefits, but housing carries with it a high public services cost burden. Cities which have aggressively sought industrial and commercial development are fiscally better off than cities which typically have provided the housing for the county's workers.

Actions of one community to increase jobs but not housing affect housing affordability in nearby communities. For example, if a city growth-management policy encourages new jobs but discourages residential development, housing demand and thus housing prices will likely be pushed upward in any community within commuting range of those jobs.

Despite the fact that locally-based decisions often have countywide impacts, there is no mechanism yet in place to allocate the costs and the benefits of such significant development more fairly across all jurisdictions affected. And, there are no obvious fiscal rewards for local governments to encourage cooperation.

Past and Present Countywide Planning Activities

Over the last few decades, there have been many attempts to coordinate countywide planning. Among them are organizations or functions which resulted from voluntary efforts and others that resulted from state legislation, either to enable or to mandate. Generally, the voluntary organizations were successful in achieving significant dialogue about important countywide issues. However, they were limited in their ability to implement their policies. State mandated functions and organizations are given authority from the state that is necessary to carry out plans and policies.

The voluntary efforts were: the Planning Policy Committee, the Intergovernmental Council, and the Golden Triangle Task Force. In addition, the County's General Plan, which includes policies of countywide significance can be described as a voluntary effort, since the county is mandated to develop policies only for the unincorporated areas. The state mandated functions are the Countywide Solid Waste Management Plan and the Congestion Management Program. The Countywide Transportation Plan is authorized by the State, but not mandated.

Planning Policy Committee (PPC)

One of the first efforts to coordinate countywide planning was the Santa Clara County Planning Policy Committee (PPC), which first convened in 1968 and existed for 10 years. The PPC was made up of planning commissioners and city council members from throughout the county. Most notable among this committee's accomplishments were building consensus among all jurisdictions within the county regarding urban development and open space preservation. The Urban Development / Open Space Plan defined general policies for the desired extent of urban development and open space land. It articulated ground rules for growth management that are still in effect.

The Intergovernmental Council (IGC)

In 1976, the County amended its charter to form the Inter-Governmental Council. This council was made up of city council members and members of the County Board of Supervisors. In the last fifteen years, the IGC successfully completed plans for a countywide system of trails, a solid waste management plan, developing awareness of cities' roles in providing child care and representing the cities and the county of Santa Clara in debates of countywide significance. In 1991, the members of the IGC decided to discontinue meeting due to the lack of funding for staff support.

The Golden Triangle Task Force (GTTF)

The Golden Triangle Task Force existed for five years, from 1985 to 1990. It was convened by the Santa Clara County Manufacturing Group to consider how cities and the county working together could address traffic congestion. The member agencies of the Task Force were the five most urban cities of the county — San Jose, Palo Alto, Mountain View, Milpitas and Sunnyvale. The major achievements of the GTTF included the rezoning of industrial land within the Golden Triangle area to residential, the creation of support for a uniform TDM program and an organization through which to develop countywide transportation and land use plans for the purpose of congestion mitigation.

The Congestion Management Agency (CMA)

The Santa Clara County Congestion Management Agency (CMA) was formed in August of 1990 in response to passage of State Proposition 111. Proposition 111 required that urbanized counties prepare an annual congestion management program (CMP). Although the primary focus of the congestion management program is to reduce congestion and thus improve mobility, the requirements of the CMP recognize the inextricable links among transportation, land use, and air quality. Moreover, the CMP legislation acknowledges that these policy issues are not only functionally interrelated, but jurisdictionally interrelated as well. Accordingly, the legislation requires cities and counties to work together to find cooperative solutions to these multi-jurisdictional problems. The work of the CMA is directed by the agency Board which is comprised of elected officials from the county and the cities.

Countywide Transportation Plan (T-2010)

Assembly Bill 3705 authorized counties to develop Countywide Transportation Plans. The County of Santa Clara's Countywide Transportation Plan outlines the transportation improvements that are needed to accommodate future growth, minimize

Continued page 5

From page 4

environmental impacts, and improve the efficiency of the existing transportation system. The plan calls for a comprehensive, coordinated approach to meeting the county's transportation needs and emphasizes transportation demand management and improvements in transit balanced with investment in highways and expressways. The Countywide Transportation Plan recommendations are incorporated into the Regional Transportation Plan prepared every two years by the Metropolitan Transportation Commission (MTC).

The County's General Plan as a Comprehensive Countywide Plan

A significant portion of the County's General Plan is devoted to countywide issues and polices. These policies address growth and development, housing, natural resources, transportation, health and safety and governance at the countywide level — the only plan in the county to do so. As such, the County General Plan can serve as a guide for future countywide planning efforts.

The current system of local government finance leads to great disparities between communities. Communities with more housing than jobs bear the fiscal burdens of growth without sharing in its economic benefits. That is because property tax and sales tax revenues in general accrue to the jurisdictions in which the property lies or in which the sale occurs. This causes an imbalance in sales tax revenues among cities within a region. One city gains the revenue and only some of the costs. Other cities gain no benefits, but share in the costs, since they must provide services for their residents.

Because of the continuing increase in demands on local budgets, local elected officials find themselves in difficult positions when it comes to making decisions regarding developments with regional impacts. On the one hand, they know there may be negative environmental and social impacts of approving such a project without in some way accounting for the costs (regional impacts) related to it. On the other hand, however, in order to meet their residents' demands for services, they are heavily motivated to approve commercial and industrial development and expensive housing, but not affordable housing, regardless of the impact of their actions on their own lower-income residents or on surrounding cities and counties.

■ The Current System

Local government's primary source of income is through property and sales taxes. Additional sources include hotel/motel taxes, business license fees and other fees including growth impact fees. The amount of revenues available to a local jurisdiction for providing services is dependent on a combination of the tax-base and the tax rate. The greater the tax-base, (total value of property within jurisdiction and dollar value of sales), the greater the revenues. The adequacy of these revenues is dependent upon the level of demand for services by residents and property owners — whether homeowners or businesses.

Local communities differ in the needs of their residents for community-based services. Cities with large demands — high crime rates, higher densities, lower income households — have greater demands for police, fire, park, library, health and community services, than more fortunate cities. If expenditures for these services are not matched with an equal amount of revenues from sales and property taxes, the level of service provided to residents and property owners will be inadequate.

In addition to the traditional sources of revenue, property and sales taxes, cities and the county receive state and federal funding for transportation, housing assistance, infrastructure (utilities) and health and human services. Currently, cities compete with each other and the county for transportation and other infrastructure funding, housing funds.

■ Restrictions on Revenue Growth

Passage of Proposition 13 (1978) and Proposition 4 (1980) together limited the amount of revenue a local jurisdiction could raise and required two-thirds vote to pass a new tax or bond issue. Now, the assessed valuation of property increases more slowly, since Prop. 13 limited increases to 2% per year and re-assessment only upon sale of the property. Increases in the tax rate must also pass a two-thirds majority.

Although increases in the tax base and tax rate are now severely restricted, increases in demand for services are not. Increasing population, employment and density, increase the demand for services. Inflation has caused the cost of providing services to increase faster than allowable revenue increases. In order to maintain adequate services, cities have turned to other means to gain revenues. Two of these other means include the practice of "fiscal zoning" and the imposition of growth impact fees on new development.

■ More Cities Turn to Impact Fees

An unfortunate outgrowth of the restrictions placed on local governments' ability to fund needed services, is the increasing use of growth impact fees. Prior to Proposition 13, services required by new development such as parks, utilities, streets and traffic lights were paid through the local jurisdiction's general fund. In essence, the entire community supported the development of these improvements through property and sales taxes as well as through general obligation bonds.

After Proposition 13, this was no longer possible, since revenue was not increasing fast enough to pay for the extension of services in addition to maintaining existing services. Also, Proposition 13, requires general obligation bonds to be approved by a two-thirds majority of the voters. In response, local jurisdictions throughout California, turned to the use of growth impact fees to cover the cost of providing services required by new development.

The fee is often based on the number of bedrooms. These fees are charged for residential development in addition to engineering and building fees required to ensure that the building is in compliance with uniform building codes. In all, it has been determined that growth impact fees could make up 10% of the total cost of a new home. Finding better ways for local government to raise revenues would moderate the need to increase the cost of housing, thereby impacting households' ability to purchase housing.

Strategies, Policies and Implementation

Strategy #1: Create an Effective Countywide Planning Organization

The siting of major sub-regional and regional facilities (such as transportation, solid waste and jails), the provision of an adequate supply of affordable housing, the preservation and appropriate management of open space and parks and the rational development of the entire county requires coordination among all planning agencies across government entities and planning functions. There needs to be a mechanism through which the people of Santa Clara County can work to resolve issues of countywide significance. This mechanism should consist of a countywide planning organization that has been given the authority to develop and implement a comprehensive countywide plan.

KEY ASPECTS OF IMPLEMENTING A COUNTYWIDE PLAN

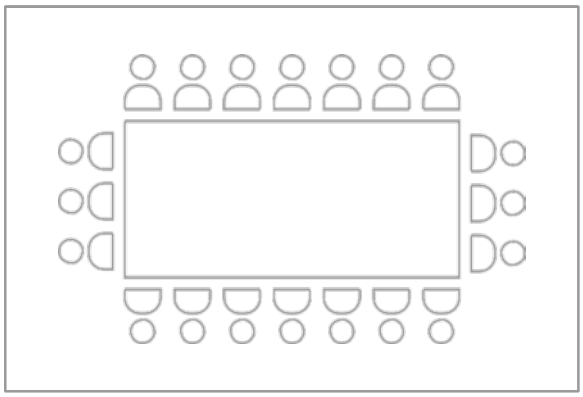
There are a number of issues that must be resolved in creating and maintaining a countywide planning organization. These include the issues of how to define the sub-region – the boundaries; representation on the governing board; the planning organization's functions; its relationship with other levels of government; its authority to implement its plans and policies; the mechanism(s) it will use to facilitate implementation; funding; maintenance of local autonomy; and responsiveness to local citizens and businesses.

■ Boundaries

Though there will never be a boundary that is perfectly suited to accommodate all countywide issues, the County of Santa Clara should be considered as the sub-region for the purposes of the countywide planning organization. In certain instances however, it may be appropriate to establish relationships with adjoining counties in order to adequately address certain countywide planning issues, such as hazardous waste management and economic development.

■ Representation

There are several models for selecting members of the governing board for a countywide planning organization. The following options are some that have been tried by other governing boards around the country.



- All locally elected officials-The board would consist only of elected officials of the cities and the county. Decisions would be made as to the size of the board and whether each city has one representative or if representation is based on population.
- All directly elected -The board members could be elected directly by the voting public of the entire county. Board members may or may not already have elected offices.
- All appointed -Board members would be selected by a group of individuals, such as members of city councils and the Board of Supervisors, other community leaders and business leaders.
- Any combination of local elected officials, directly elected members and appointed members.

■ Functions

In general, a countywide planning organization would have several functions.

- The organization could play a major role in ensuring that uses that are of benefit to the entire county (such as affordable and higher density housing, child care, residential care facilities, etc) are located within appropriate areas of the county.
- It could see to it that major regional facilities, such as transit and waste management facilities are also located appropriately.
- It could monitor countywide conditions on an on-going basis and update plans and policies accordingly.
- It could review local plans and interface with local agencies to assure compliance with countywide plan.
- It could administer a countywide revenue sharing program.
- It could mediate conflicts that arise between jurisdictions over decisions regarding land use.
- It could serve as a one-stop permit processing center for permits required by regional and state regulatory agencies.

More specifically, the countywide multi-purpose planning organization could address the following functional areas:

- economic development planning;
- land use / growth management planning;
- allocating housing needs among local jurisdictions;
- planning community services, including child care;
- transportation/mobility and congestion management planning;
- hazardous and solid waste management planning;
- parks/open space planning; and
- airport planning.

■ Relationship With Other Levels of Government and Planning Organizations

The countywide planning organization could maintain an on-going relationship with agencies in several ways. First, the countywide comprehensive plan could generally use existing plans as its basis. Second, the governing board could represent those affected by the planning process. Third, the cities, the County and other planning agencies could inform the countywide planning organization of anticipated changes in plans and project proposals on an on-going basis. The countywide comprehensive plan should be used as a basis for providing input into state and regional policy. The agency could also determine consistency with regional and state plans and policies.

■ Authority

The authority for countywide planning could be either from the state or through local agreements between the cities and the county. Either way, the countywide planning agency should have the authority to review local general plans to make a determination of consistency with the countywide plan and to establish a process for mediating conflicts between jurisdictions. Often, in order for regional or countywide plans to be effective, enabling legislation from the state is critical. In addition, multi-purpose, countywide planning organizations need, from the state, authority to enforce their plans.

■ Implementation

Local agencies would continue to have primary land use and project approval authority. Implementing the countywide plan, therefore would require the active participation of each local agency. There are three basic alternatives to facilitate implementation through local agencies: First, the countywide planning agency could be given the authority by the state to mandate compliance. Second, a system of incentives and disincentives (usually monetary) could be established. Local agencies in compliance would be eligible for certain state or local funds for the construction of roads, housing or other projects. Those found not to be in compliance would lose their opportunity to receive such funds. Third, implementation on the part of local agencies could be voluntary.

■ Funding

Most of the functions of the countywide planning organization could be accomplished through existing funding sources. Functions that do not already have their own funding sources would require some means of support. Sources of funds may include new state revenues and/or surcharges and fees. However, a new countywide agency should not be established without adequate funding.

■ Maintenance of Local Autonomy and Accountability

Since land use authority remains primarily with each local agency, local jurisdictions should continue to have autonomy over land use decisions except where their policies are in conflict with the countywide plan. In that instance differences in plans and policies could be resolved through a conflict resolution process that involves all affected parties.

■ Responsiveness to Local Citizens and Agencies

Citizens, businesses and property owners should be able to continue to resolve their land use concerns with their elected officials and planning agencies. The countywide planning Jagency should address land use issues only in instances where resolution of land use issues is not possible at the local level.

Possible Contents of Integrated Countywide Plan

The Countywide Comprehensive Plan should generally be based on the existing plans of the cities, the County, special districts and other agencies of Santa Clara County and could consist of the following planning topics:

- economic development;
- growth management/urban development;
- housing supply and affordability;
- community services, including child care;
- transportation/mobility and congestion management;
- hazardous and solid waste management;
- parks/open space; and
- airport land use.

➔ *Policies and Implementation*

C-GV 1
Establish a countywide multi-purpose planning organization with authority to prepare and implement a comprehensive countywide plan.

C-GV 2
The countywide multi-purpose planning organization could have the following functional areas:
a. economic development planning;
b. land use / growth management planning;
c. allocating housing needs among local jurisdictions;
d. planning for community services including child care;
e. transportation/mobility and congestion management planning;
f. hazardous and solid waste management planning;
g. parks/open space planning; and
h. airport planning.

C-GV 3
The countywide planning organization should be established to provide greater integration, efficiency and effectiveness than can be achieved through the current system.

C-GV 4
A countywide plan for growth and development, infrastructure capacity, and preservation of natural resources should be prepared, adopted and implemented by the cities, county, and affected districts.

C-GV 5
The Countywide Comprehensive Plan could generally be based on the existing local general plans of each of the cities, the County, special districts and other agencies of Santa Clara County and may address topics such as:
a. economic development;
b. growth management/urban development;
c. transportation/mobility and congestion management;
d. housing supply and affordability;
e. community services, including child care;
f. solid and hazardous waste management;
g. parks/open space; and h. airports planning.

C-GV 6
Institute a means by which the state provides economic support to local entities whose plans and projects are consistent with the countywide comprehensive plan.

C-GV 7
Local land use authority shall remain primarily with each local jurisdiction. However, all local jurisdictions' land use decisions that have regional significance should be consistent with the countywide comprehensive plan.

C-GV 8
The Countywide Comprehensive Plan should serve as a basis for shaping the form and function of regional and statewide planning and to secure state and federal program decisions more favorable to the county.

C-GV 9
Use the countywide plan as a basis for reviewing proposed federal, state and regional planning, construction, regulatory and funding programs affecting Santa Clara County.

Implementation Recommendations

C-GV(i) 1
The County should initiate efforts to establish a countywide planning organization. (Implementor: County)

C-GV(i) 2
Seek agreement within Santa Clara County about:

a. the need for countywide comprehensive planning;
b. a countywide multi-functional planning organization; and
c. the functions and the structure of that countywide planning organization.

C-GV(i) 3
Seek state enabling legislation that would authorize the countywide planning organization to carry out specific countywide planning functions, to implement its plans and to acquire the necessary funding to do so.

C-GV(i) 4
Encourage broad-based community participation in the development of the countywide comprehensive plan.

C-GV(i) 5
Support the establishment of a mechanism for determining whether local plans are consistent with an integrated statewide plan.

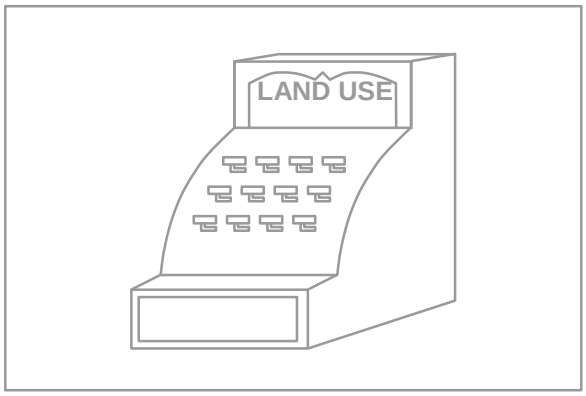
C-GV(i) 6
Support measures to institute a pool of funds that would be used to reward local agencies whose plans are consistent with their countywide, regional and/or statewide plans. Such a pool of funds would induce local entities to address regional impacts as part of their local land use decision-making processes.

C-GV(i) 7
In light of changes in proposed state legislation regarding regional planning and the evolution of local agencies such as the Congestion Management Agency towards more effective coordination of countywide transportation and land use planning, implementation of Governance Chapter recommendations regarding creation of a new countywide planning organization should be held in abeyance and re-evaluated after there has been sufficient time to allow the efforts of the CMA and related endeavors to develop.

Strategy #2:
Reform Local Government Finance to Encourage Balanced Land Use

Among other things, fiscal reform should reduce the competition between jurisdictions for commercial and industrial development, which ultimately impedes growth in housing supply and distorts land use patterns through land use decisions that focus on maximizing tax revenue rather than sound planning.

Several funding options exist to reduce the need of local governments to practice fiscal zoning. Some are purely local initiatives, others involve enabling legislation at the state level. The discussion below serves to illustrate the range of options available.



OPTIONS FOR MEETING LOCAL REVENUE NEEDS

■ Provide a Mechanism to Institute Revenue Sharing

A system that encourages development in some areas but not others, creates winners and losers. To help equalize the impacts of this growth-management system, a tax-base sharing program could be implemented. This program would distribute the economic benefits of commercial and industrial development throughout the county.

A program such as this would enable all cities in the metropolitan area to receive a share of the growth in the area's tax base, irrespective of the physical location of the added tax base. A certain percentage (40 percent in Minneapolis-St. Paul) of the annual growth in its commercial/industrial tax-base would be placed in a countywide pool. The funds would be redistributed to communities according to their needs. Such a strategy would:

- lessen the intraregional competition for commercial/industrial development; and
- promote more efficient land use patterns.

Possibilities include:

- Reallocation of part of the local sales tax now distributed on the basis of where purchases are made. Reallocation would be based on all or part of the incremental population growth within each city.
- Distribution to local jurisdictions on the basis of compliance with fair share housing allocations and/or the achievement of locally-defined housing goals. This might be preferable to a per capita allocation since it rewards efforts to build housing.
- Reallocation on the basis of compliance with countywide comprehensive plans and/or with State growth guidelines, should they be developed.

■ Simple Majority to Pass Tax Increases and Bond Issues

Allowing a majority of local voters to approve changes in the local property tax rates, either for services or to fund improvements in public infrastructure would enhance local communities' ability to fund necessary services. The existing provisions of Proposition 13 limiting increases in assessed values could be retained. Currently, Prop 13 requires a two-thirds majority for new taxes. Several jurisdictions, including most school districts, are in desperate need for funds to maintain existing facilities. Many have placed bond issues on the ballot that have lost with 65% of the vote in favor of the bond.

■ Local Sales Taxes

The existing local sales tax encourages cities and counties to make land use decisions that are not optimal from a regional perspective. That is, in order to gain the increased revenues generated by a retail operation, local governments will make siting decisions that increase traffic congestion and other problems for nearby local jurisdictions. In addition, this fiscal incentive causes retail operations to be favored over other types of nonresidential development, which may be preferable from employment and community development perspectives. To remedy this problem, some of the existing local sales tax could be replaced with a corresponding increase in the state sales tax. The state could then re-distribute its increase in sales tax to cities and counties based on local need.

■ Restructure State Government

There has been much talk about the need to restructure state government so that both state and local government needs are met in a more effective and efficient manner. Restructuring at the state level would ideally happen concurrently with changes in financing local and state government. Any new method of allocating state and local revenues should give local government more flexibility to meet their specific functions and needs, clarify the relative roles of state and local government, and distribute state resources across communities on the basis of communities' relative needs so that

each community has equal opportunities to provide for the well-being of their residents.

OTHER MEANS OF RAISING LOCAL REVENUES AND ENCOURAGING BALANCED LAND USE

- Distribute state funds for infrastructure only to regions meeting countywide and statewide guidelines in state planning legislation.
- Increase the cost of operating an automobile. This provides new revenues and helps balance the current automobile subsidies now in existence. Possibilities include higher gasoline taxes, employee parking charges, general parking taxes, higher highway and bridge tolls that vary by time of day, pollution charges (which assess fees to vehicles based on the amount of pollution they generate), and increased motor vehicle registration fees based on miles driven or on gasoline consumed.
- Establish a regional infrastructure funding mechanism, such as a regional fiscal authority, with the power to levy fees or taxes, for the purpose of funding projects which are consistent with the countywide comprehensive plan.

➔ ***Policies and Implementation***

C-GV 10
Reform the structure of local and state finance so that fiscal considerations are no longer a major factor in local government land use planning, economic development and housing policy decisions.

Implementation Recommendations

C-GV(i) 8
Initiate efforts to explore alternatives for local government finance reform that could be implemented at the local level.

C-GV(i) 9
Initiate efforts to amend state law so that cities are supported in their efforts in providing affordable housing. Such support could take the form of economic assistance in constructing affordable housing.

C-GV(i) 10
Support state legislation to reform local government finance so that fiscal considerations are no longer a major factor in land use planning.

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Seat 2:
Robert Johnson
Seat 3:
Connie Rogers
Leonard Hale
Seat 4:
Bob Dougherty
Marshall Goldman
Lauralee Sorensen
Barbara Winckler

Note: Four seats on the advisory committee were allocated to city council representatives appointed by the Santa Clara County Cities' Association. Some of these representatives were unable to serve for the entire duration of the program. Where more than one councilmember is listed for one seat, they are listed in order of service, with the most recent member listed first.

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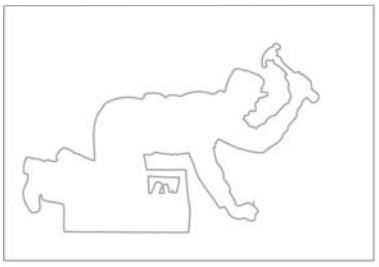

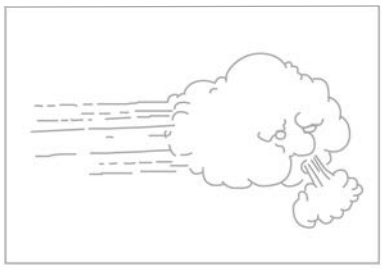

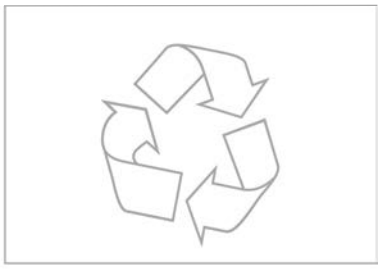

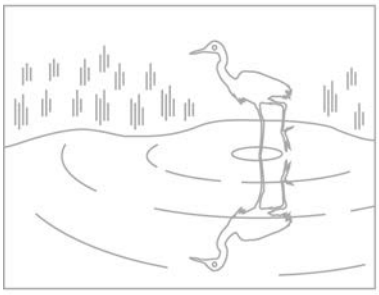

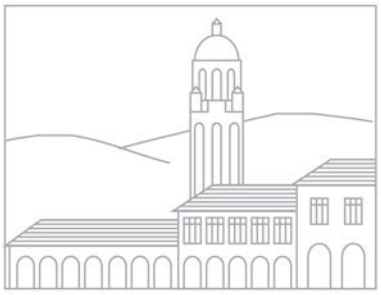

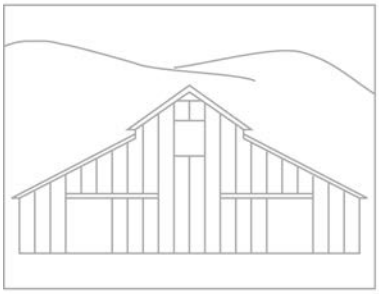

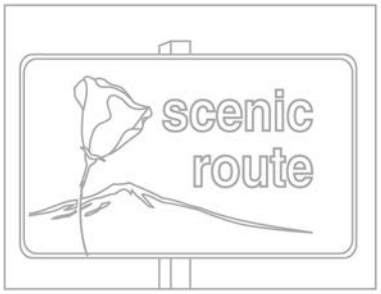

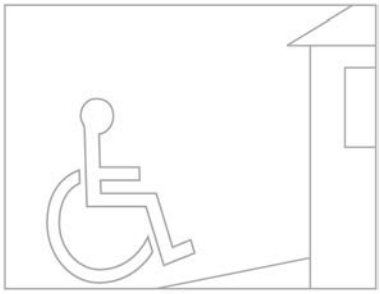

Santa Clara County
GENERAL PLAN