



Solano County *California*

2015–2023 Housing Element Update



April 2015



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CHAPTER

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HOUSING ELEMENT

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CHAPTER 1. INTRODUCTION

This update of the Solano County Housing Element is broken into three chapters, including this **Introduction** chapter, a chapter that outlines the County's **Goal, Objectives, Policies, and Programs**. This Housing Element also incorporates by reference a separate **Housing Needs Assessment (Appendix A)** and **Review of Previous Housing Element (Appendix B)**, which was prepared as a background report for the Housing Element update and contains data and analyses required by state law to accompany the Housing Element.

Housing Element Background

Purpose. The purpose of the Housing Element is to establish a comprehensive plan to address housing needs in the Unincorporated area of Solano County, with a focus on meeting the housing needs of all economic segments of the community, including low- and moderate-income households which may have trouble affording market-rate housing and populations with special housing needs that may not necessarily be met through conventional housing products.

Housing Element Planning Period. This Housing Element update is intended to address the County's housing needs for the planning period of January 31, 2015 through January 31, 2023. This planning period was established for Solano County and other Bay Area jurisdictions by state law. This Housing Element will remain in effect until such time as the County adopts an updated Housing Element.

Statutory Requirements. According to state law, the Housing Element is one of seven elements that must be included in a California General Plan, along with any number of optional elements that a jurisdiction may wish to include. The County organized the 2008 General Plan by chapters that combine some of the required elements with non-required elements. The following chapters include mandated elements: Chapter 2 – Land Use, Chapter 4 – Resources, Chapter 5 – Public Health and Safety, Chapter 7 – Transportation and Circulation, and Chapter 9 – Housing Element. In addition to the mandated elements, the County's General Plan includes the following chapters that contain optional element content: Chapter 3 – Agriculture, Chapter 6 – Economic Development, and Chapter 10 – Park and Recreation Element.

As one of the County General Plan chapters, the Housing Element is a very important policy document for the County, not only for its specific provisions as they relate to housing, but also because the other elements included in the General Plan must be consistent with the Housing Element. Should the adopted Housing Element update create internal inconsistencies with other portions of the Solano County General Plan, the County will subsequently undertake amendments to the other affected elements in order to bring about consistency among all General Plan elements. The County is currently updating its Public Health and Safety Element and will address the requirements of Assembly Bill (AB) 162 relating to flood protection.

Housing Element

In addition to identifying the Housing Element as one of the required General Plan elements, state law also includes specific guidance as to the contents and preparation of Housing Elements and Housing Element updates. As mandated by state law, the Housing Element was prepared in consideration of an extensive Housing Needs Assessment that evaluates local conditions and needs with regard to housing demand, supply, and affordability. Further, based on the Needs Assessment, Housing Element law requires that the County establish a set of goals, objectives, and policies with regard to housing in the local community and specify a series of programs and activities that the County will implement in order to work toward achieving its goals.

Housing Element Public Participation Process

Public Workshops

State law requires that "the local government shall make a diligent effort to achieve public participation of all economic segments of the community in the development of the housing element." (Government Code § 65583). The Housing Element update was prepared with a goal of incorporating broad-based community input, particularly in the areas of housing needs and updating housing policies. To this end, Solano County hosted a Housing Element workshop with the Planning Commission on August 7, 2014, for the purpose of obtaining input from residents and stakeholders on local housing needs. County staff and the consultant made a presentation describing the purpose of the Housing Element and the requirements governing its contents. Topics of discussion included updated demographic data for Solano County, new legislation requirements, and the public outreach process. A schedule for the project was also discussed.

No members of the public spoke at this workshop. Planning Commission members had questions regarding the preliminary demographics presented in the slideshow presentation and whether previous Housing Element Program I.2 Standards and Guidelines for Energy Efficiency and Conservation still applied. Commissioners also mentioned the importance of farmworker housing in the unincorporated county, and the fact that the county is rural and some of the uses required by state law like single-room occupancy units (SROs) and transitional and supportive housing are "urban" uses. In addition, many vacant sites in the unincorporated county are not near services and transit. Staff mentioned that there is some redevelopment set-aside money remaining and available for housing rehabilitation.

The County posted ads in the *Fairfield Daily Republic*, *Vacaville Reporter*, *Vallejo Times-Herald*, and *Benicia Herald* and also sent notices via direct mail to a mailing list of individuals and stakeholder organizations.

The mailing list included stakeholder and advocacy groups for farmworkers/agriculture, low- and moderate-income housing, seniors, disabled, and fair housing. The list of those notified is located in Appendix D.

Public Hearings

The administrative draft Housing Element was released for public review on October 25, 2014. The mailing list of individuals and stakeholder organizations was also notified on that day of the availability of the draft and regarding the upcoming meeting with the Board of Supervisors. On November 4, 2014 the Board of Supervisors reviewed the administrative draft Housing Element and made a recommendation to direct staff to submit the draft to the California Department of Housing and Community Development (HCD) for the 60-day review period. County staff and the consultant made a presentation describing Housing Element update process and the key analysis and program updates in the draft Housing Element. The members of the Board of Supervisors asked questions regarding the upcoming zoning amendment to address previous Housing Element implementation to comply with Senate Bill 2 regarding emergency shelters. County staff will work with the Board of Supervisors to determine the proposed zone or zones to allow emergency shelters by right in the County.

The Board of Supervisors hearing was noticed two weeks prior to the hearing in the *Daily Republic*, the *Dixon Tribune*, the *Vacaville Reporter*, the *Vallejo Times Herald*, the *Rio Vista River News Herald* and the *Benicia Herald*. In addition, the hearing was televised and the hearing is available for review on the County's website. Once the Housing Element is submitted to HCD, a copy of it will be available for review on the County's website. If any comments are received during the 60-day review period, the County will incorporate those comments into the Housing Element prior to adoption.

Review of Previous Element

Government Code Section 65588(a)(2) "Review and Revision" requires that each local government review its Housing Element as frequently as appropriate to evaluate the effectiveness of the Housing Element in attainment of the community's housing goals and objectives. For a complete list of the status of all programs in the Housing Element, see **Appendix B** (Review of Previous Housing Element).

CHAPTER 2. GOAL, OBJECTIVES, POLICIES AND PROGRAMS

This portion of the Housing Element establishes the County's policy direction for housing within its jurisdiction. This chapter first states the County's housing goal and then describes a series of objectives, policies, and programs that are intended to focus the County's efforts to achieve that goal.

Goal

It is the county's goal to promote and ensure adequate housing in a satisfying environment for all residents of Solano County.

In order to achieve the intent of this statement, it is necessary to establish short-term objectives and policies that will overcome the major obstacles that prevent realization of the goal. In addition to listing a set of policies that can serve as a general framework for County planning and decision-making on a range of issues (e.g., land use, public services, capital improvements, etc.), the Housing Element also includes a set of programs that call for the County to undertake or promote specific actions that will help to achieve Housing Element objectives. Thus, this chapter summarizes major housing issues identified in the Housing Needs Assessment chapter and in the prior Housing Element and then lays out objectives, policies, and programs that, taken together, are intended to focus the County's efforts to achieve its housing goal by addressing the identified housing issues.

The objectives, policies, and programs that follow are organized under one of nine subject areas, as follows:

Objective, Policy, and Program Subject Areas

- A. Housing Conservation and Rehabilitation
- B. Opportunities for Housing Production
- C. Affordable Housing Assistance
- D. Special Housing Needs and Equal Housing Opportunity
- E. Governmental and Non-Governmental Housing Constraints
- F. Housing Location, Density, and Timing
- G. Public Facilities and Services
- H. Environmental Quality
- I. Energy Conservation

For each subject area, there is a discussion of related housing issues followed by an outline of the policies and programs that the County intends to implement in order to address the identified housing issues. At the heart of each issue area are the following core programs themes:

Financial Assistance. Providing financial assistance is one of the County's mechanisms to help increase the supply of affordable housing in the current planning period. In exchange for contributing public financial assistance to affordable housing projects, the County will also seek agreements to keep assisted units permanently affordable, so that the units remain a part of the County's affordable housing stock for the long term. Furthermore, an injection of locally controlled public funds is often the catalyst that allows an affordable housing project to leverage additional public and private funds that are necessary to expand the local affordable housing stock.

Program Partnerships. Due to its limited resources, the County will seek to implement housing assistance programs through actively developing and participating in program partnerships with other local public and private organizations. The County's existing partnership with an outside agency/organization to operate the County's Community Development Block Grant and HOME housing rehabilitation programs and its participation in the Solano County Continuum of Care are all examples of program partnerships that allow the County to utilize its available resources in the most efficient manner possible. The County also has a partnership with the City of Vacaville Housing Authority to manage the County's Department of Housing and Urban Development (HUD) Section 8 program.

Housing Assistance Outreach. Although housing assistance resources are almost always in short supply relative to the need, it is important that the County make efforts to publicize the available assistance programs to those individuals and households who are most likely to need help. Effective outreach can help to ensure that limited resources can get to those who need them most. Housing assistance outreach is another example of an activity that should be implemented through program partnerships.

These three core program themes can be found throughout the nine subject areas. This provides opportunities for the County to streamline its implementation activities by consolidating related activities under a single program. For example, a Financial Assistance program includes components for rehabilitation projects and for new affordable housing production. In addition to the core program themes that deal with general implementation needs, there are programs and activities that deal with specific regulatory requirements such as dealing with specific local housing needs that have been identified in the Housing Needs Assessment.

A. Housing Conservation and Rehabilitation

An important aspect of ensuring adequate housing in a satisfying environment in Solano County is the conservation and rehabilitation of the existing housing supply. Conserving and improving the County's housing supply not only requires the rehabilitation of substandard structures, but also the continued maintenance and upkeep of existing structures in fair to sound condition. A housing unit begins deteriorating from the day the structure is built. While deterioration occurs over a period of time, the need to paint or re-roof, replace a water heater, or make other household repairs become "due" at various intervals over the life span of a structure. In many cases, low- or fixed-income households can neither afford to set aside funds to meet normal maintenance costs, nor to pay for restoration of substandard units. Households can borrow money for household repairs and home improvement, but many households most in need cannot qualify for such loans. In addition, the cost of rehabilitating a home can have a negative impact on the affordability of housing for low- and fixed-income households. The costs of repairs and improvements on rental structures are often passed on to the renter in terms of higher rents.

Code enforcement in Solano County is conducted on a complaint basis. The County seeks voluntary compliance whenever possible. Legal action is only taken when all voluntary options have been exhausted. Typically upon receipt of a complaint, an inspection is made with the property owner or tenant and a Warning of Violation describing any violations, necessary corrective actions, and time frame for correcting the violations is issued. The property is reinspected and if violations have not been corrected, a Notice of Violation is issued. If after this notice the violations have not been corrected, a Final Notice is issued, which gives the property owner the ability to appeal the notices to a hearing body. If corrections are not made and an appeal is not filed, the complaint is referred to the District Attorney for action.

The housing conservation and rehabilitation policies recognize the significant advantages in preserving and upgrading the existing housing stock because maintenance of existing units provides expanded home ownership opportunities for low- and moderate-income families. By providing assistance to households in need, surrounding households are encouraged to maintain their homes and make necessary repairs.

The following policies suggest continuation and expansion of the County's housing rehabilitation programs. Rehabilitation programs would continue to provide loans and/or grants for home repairs. The programs would be coordinated with other housing and public improvement programs where appropriate. The County will seek to expand rehabilitation programs through varied funding sources including Community Development Block Grant (CDBG) and HCD funding, redevelopment funds, and other state and federal programs. In unincorporated, urbanized areas adjacent to cities, rehabilitation programs would be seen as a means of upgrading communities that would encourage their eventual annexation to cities.

Objective

A. Conserve existing affordable housing units and rehabilitate the existing housing stock of Unincorporated Solano County.

Policies

A.1 The County shall work to conserve its existing affordable housing stock and reduce substandard housing through ongoing housing rehabilitation programs targeted to assist extremely low-, very low-, low-, and moderate-income households.

A.2 The County shall seek to coordinate its housing conservation and rehabilitation plans and programs with those of other public and private agencies.

Programs

A.1 Financial Assistance and Outreach – Rehabilitation. To assist private property owners in rehabilitating the housing stock, the County will consider applying for Community Development Block Grant funds and other funding sources as available including funding from the federal Department of Housing and Urban Development, the California Department of Housing and Community Development, remaining local redevelopment set-aside funding, and other governmental or private sources. As the County applies for and receives funding to provide rehabilitation loans they will notify the public of available housing rehabilitation programs in coordination with city housing authorities and other public and private agencies.

Responsibility: Resource Management, County Housing Authority, city housing authorities adjoining project areas.

Target Date: The County will consider applying for funds annually, as demand necessitates, and as Notice of Funding Availability (NOFAs) are released. Outreach will be ongoing as funding is available.

Funding Source: CDBG, HOME, Rehabilitation Loan Pool.

A.2 Program Partnerships – Rehabilitation and Preservation. The County will seek to maintain its existing supply of assisted housing through the development of programs in coordination with other public and private nonprofit housing agencies. The County will seek to expand rehabilitation opportunities by coordinating and working with financial institutions and nonprofit agencies to expand the supply of funding available and by recycling program income from existing programs into future rehabilitation programs.

The County currently contains no deed-restricted affordable units and therefore there are no "at-risk" units at this time. Should the County have any affordable units prior to the end of the planning period, the County will contact all state and federal agencies that might provide affordable housing funds to determine whether any funding is available for future

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preservation of assisted housing developments. The County will work with not-for-profit housing providers to apply for affordable housing subsidies that may be available for this use, if necessary in the future.

Responsibility: Resource Management.

Target Date: The County previously contracted with Mercy Housing to monitor rent limitation agreements under the County Housing Rehabilitation Program but the contract expired in June 2008. The County may need to contract with a consultant in a year or two depending on interest in the program. The County will contact agencies and non-for-profit housing providers within a year of any subsidized affordable units becoming deed-restricted during the planning period (2015–2023).

Funding Source: Rehabilitation loan pool.

B. Opportunities for Housing Production

The County of Solano and its incorporated cities have a joint responsibility to ensure that there is an adequate supply of housing to meet projected countywide housing needs. As developable land becomes scarcer and increasingly costly in the inner Bay Area, demand continues to increase for housing within Solano County jurisdictions, including the Unincorporated area.

A primary measure of Solano County's need for new housing production is the Regional Housing Needs Allocations (RHNA) produced by the Association of Bay Area Governments (ABAG) for the January 1, 2014 through October 31, 2022, time period. ABAG allocated the unincorporated part of Solano County the following housing needs:

Household Income Category	# of Units	% of Total
Extremely Low Income (0-30% of AMI)	13	13%
Very Low Income (31-50% of AMI)	13	13%
Low Income (51-80% of AMI)	15	14%
Moderate Income (81-120% of AMI)	19	18%
Above Moderate Income (120%+ of AMI)	43	42%
Total	103	100%

To satisfy housing needs, the County and the cities each have historically played distinctive roles. The County has primarily provided for housing which has been agriculturally related or rural in character. Higher density single-family and multiple-family developments, on the other hand, have been provided primarily in the cities. This has resulted from General Plan policies and servicing constraints which have limited the range and quantity of housing which can be provided in the unincorporated area.

Historically, the principal type of housing provided by the County is the single-family home, which is usually self-supporting relative to water and sewer service. Multi-family residential development in the unincorporated area is located only in those areas where community water and sewer systems are available to support the more intensive infrastructure needs of higher density development, principally in the Vallejo unincorporated area. In addition, the County Zoning Code allows manufactured homes to be placed on foundations in any zoning district where a single-family dwelling unit is allowed.

The County allows secondary living units in Exclusive Agricultural, Rural Residential, and Residential-Traditional Community (R-TC) zoning districts. Analysis conducted as part of the Housing Needs Assessment indicates that these types of smaller dwelling units, which can be constructed on parcels already containing a primary residence, can be produced at costs that would make them affordable to low-income households, and in some cases very low-income households.

It is evident that if the County is to ensure an adequate supply of housing to meet its varied housing needs, a cooperative program between the County and cities that sets forth each jurisdiction's role and responsibilities must be clearly defined. The policies of the County General Plan specifically define the County's role as one that is designed to complement the housing efforts of the cities rather than to compete with them by attempting to provide a full range of housing choice in the Unincorporated area, thereby duplicating necessary services. The County and the cities have recognized that infrastructure capable of supporting urban growth has not been provided in the Unincorporated area, consistent with smart growth principles that call for directing growth to cities. These principles also dictate that urban infrastructure not be extended into unincorporated areas in the future, because of its growth and sprawl-inducing effects. These policies help confine urban development to existing urban centers where supporting services are presently available, providing for better access to employment and service facilities. These policies have been further reinforced with the passage of Proposition A (Ordinance 1230) in 1984, the Orderly Growth Initiative in 1994, and Measure T in 2008.

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Objective

B. The County will provide sufficient land to accommodate Solano County's projected housing needs. As of September 2014, the County's remaining unmet need is as follows. (See the resources section of Appendix A for a complete analysis.)

Progress Toward Achieving RHNA

Income Group	ABAG Allocation	Constructed Units	Remaining Need
Extremely Low	13	4 ^{1,2}	37
Very Low	13		
Low	15		
Moderate	19	1 ³	18
Above Moderate	43	4 ⁴	39
Total	103	9	94

1. The extremely low, very low, and low income categories have been combined in some of the columns in the table above to make up the lower-income RHNA. This approach is acceptable per HCD guidance.
2. Four secondary units affordable to low-income households.
3. One manufactured home affordable to moderate-income households.
4. Four single-family homes affordable to above moderate-income households.

Policies

B.1 The County shall seek to achieve coordination of housing goals, objectives, policies, and programs between the County and the cities in the county. The County shall maintain an inventory of sites adequate to satisfy its remaining unmet need for housing production through the remainder of the Housing Element planning period. Should the County satisfy all of its housing need allocations through production in the Unincorporated area or by transferring responsibility to cities, the County shall maintain information regarding vacant land in the Unincorporated area, such as English Hills and Homeacres, that is available and appropriate to accommodate additional housing development.

B.2 The unincorporated County's principal housing role shall be to accommodate future residential development that constitutes an accessory use to agriculture (farm residence and farm labor quarters) and a moderate amount of rural residential development.

B.3 Housing units in the unincorporated County shall consist primarily of single-family homes. These include conventional stick-built homes as well as manufactured dwellings certified under the National Mobile Home Construction and Safety Standard Act which meet minimum County architectural and development standards.

B.4 Manufactured homes may be used in the unincorporated County as permanent structures for secondary living units, and farm labor and caretaker housing.

B.5 The County shall actively encourage and facilitate the development of secondary dwelling units as a means to expand the overall supply of housing, especially as a means of providing relatively affordable housing, e.g., for people employed in the agricultural areas, or for the elderly or disabled, who may need to receive assistance from a relative or caregiver residing on the same property.

Programs

B.1. Countywide Housing Production and Coordination. The County will coordinate its planning and program efforts with the cities to ensure that adequate quantities of various housing types are provided to meet the County's total projected housing needs. The County inventoried its available sites for housing development and identified sites by zoning category that are available to meet its housing need allocation for the Housing Element planning period. The inventory is summarized in **Appendix A** and includes sites for housing by income category.

In addition to meeting the RHNA, the County has additional sites to accommodate a variety of housing types. The County General Plan identifies an Urban Residential designation which allows for up to 25 units per acre but does not have a corresponding zoning district that allows for the same density. This is because the County believes while some development has been allowed to occur where limited urban services were provided by cities and special districts, current General Plan policies maintain that "what is urban should be municipal," meaning that development requiring urban services should occur within an incorporated city.

To encourage the development of these sites the County will work with the adjacent cities to ensure that their rezoning of these sites can accommodate housing for up to 25 units per acre and the County will facilitate the annexation process of these sites into the cities when the cities are ready to annex. Upon annexation of these sites into the cities, the County, if necessary, will also negotiate a transfer of RHNA units that will be accommodated on these sites. The County has negotiated successful RHNA transfers in the past and will continue to work with the neighboring cities to facilitate compact development to address climate change and energy conservation, and maximize land resources to preserve agricultural and open space resources.

Responsibility: Resource Management.

Target Date: 2015–2023; continue to provide sites to meet the County's RHNA allocation of 103 units and continue to work with the adjacent cities to coordinate plans for annexation and then work with the cities to negotiate annexations of land and transfers of RHNA if needed. The County will annually report building permits issued to ABAG.

Funding Source: County General Fund.

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B.2 Secondary Dwelling Unit Program. To maximize the potential for housing development on its existing residentially zoned land, the County will continue to implement streamlined permitting processes for these types of units. The County will continue to make information available at the public counter about secondary dwelling unit options and standards.

Responsibility: Resource Management.

Target Date: Ongoing, review information and update if needed annually.

Funding Source: County General Fund.

C. Affordable Housing Assistance

Housing affordability is a nationally recognized problem, and programs at both the state and national level have been designed to provide assistance for the provision of low- and moderate-income housing. In the 1979 Housing Element, a program was set forth to establish a County Housing Authority to enable the County to participate in many of these programs. The Housing Authority was subsequently established in 1979. The County contracts for the operation of the County Housing Authority with the City of Vacaville Housing Authority. At present, the Solano County Housing Authority provides 251 Housing Choice vouchers (Section 8) per year for rental assistance. There are currently 51 vouchers in use in the unincorporated County. There is a wait list for vouchers of 1,102 households for the area administered by the Solano County Housing Authority, which includes the cities of Dixon and Rio Vista as well as the unincorporated County. Most of the County's "affordable" housing involves market-rate primary and secondary residential units located in older established neighborhoods and in scattered locations throughout the agricultural region. Most of these units are single-family structures, though some multiple family units exist in the Vallejo unincorporated area. Historically, the County has not had publicly regulated affordable housing units.

While the County has taken steps to address the problem of affordable rental housing for existing households through the Section 8 rental assistance program, this need far exceeds available funding. However, the County has been successful in achieving full utilization of its available Section 8 vouchers, and the County will seek to obtain allocation of additional Section 8 vouchers, so that the program can serve additional local households in need of assistance.

In addition, service constraints make it difficult to provide new affordable owner- and renter-occupied housing for lower-income households. The County is not equipped in most areas to provide the necessary supporting facilities and services for new assisted and subsidized housing. However, regardless of these service constraints, the County recognizes its responsibilities to address the needs of lower-income households in obtaining suitable affordable housing.

The policies and programs suggest an approach to overcome many of the constraints to affordable housing. The County must maintain, conserve, and improve its existing supply of available housing. The County must also work closely with the cities in designing and administering programs to provide affordable housing to lower-income households. Funding available to the County for housing assistance will be channeled through the most appropriate agency for administration in either the Unincorporated area or within a city jurisdiction. In some cases it is expected the County will undertake joint programs with local agencies in order to make most effective use of available funding and to provide housing assistance at the most appropriate locations. Through provisions of the zoning code, manufactured housing units and secondary dwelling units, including units incidental to agricultural uses, opportunities for low-cost housing will be provided. In accordance with state law, the County will establish regulatory incentives, such as relaxing site development standards or providing permit fast-tracking, to encourage affordable housing production by private developers.

Objective

C. Provide housing to meet the needs of all economic segments of the community, including extremely low-, very low-, low-, moderate-, and above moderate-income households. While the County will address its full housing need allocation for the RHNA projection period through the sites inventory analysis, it is recognized that the County does not directly participate in production of most new housing units and that the ultimate number of new housing units is highly dependent on factors beyond the County's control.

Policies

C.1 The County shall make every effort to reduce the cost of housing to lower- and moderate-income groups through local, state, and federal housing assistance programs.

C.2 The County shall support the construction of new subsidized housing units in those areas which are best equipped to provide the necessary services and facilities to support such development, such as the Homeacres area.

C.3 Manufactured, modular, and innovative housing designs that make use of new technologies and materials that bring about cost and energy efficiency shall be encouraged by the County.

C.4 The County shall work and coordinate with public and nonprofit housing groups to maintain the County's existing supply of assisted housing.

C.5 The County shall work and coordinate with public and nonprofit agencies and the private sector in seeking solutions to providing affordable housing.

C.6 Consistent with state laws, the County shall provide regulatory concessions for qualifying affordable housing developments.

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Programs

C.1 Financial Assistance - Affordable Housing Production. The County will utilize available local funding sources for affordable housing, primarily involving application for CDBG funds from the state and HOME funds, and seeking to expand the County's Section 8 voucher program. The County will apply for funding based on the level of public demand. Because of the competitive nature of the CDBG, HOME, and the Section 8 programs, it is not possible to estimate the amount of funding that could be obtained from these sources through the remainder of the Housing Element planning period. To leverage local subsidy sources, the County and County Housing Authority will seek funding for extremely low-, very low-, and low-income housing assistance through state and federal housing programs in the development of local housing assistance programs.

Responsibility: Resource Management.

Target Date: The County will continue to look into and if appropriate apply for funds annually and as Notice of Funding Available (NOFAs) are released.

Funding Source: Section 8, CDBG, HOME, and other funding sources as they become available.

C.2 Regulatory Incentives for Affordable Housing. The County will continue to work with developers to comply with Sections 65915 and 65917 (density bonuses) of the California Government Code and AB 1866 (secondary dwelling units).

The County will also amend the Zoning Code to adopt a density bonus ordinance in compliance with Government Code Sections 65915 and 65917.

Responsibility: Resource Management.

Target Date: Adopt density bonus ordinance within one year of Housing Element adoption; 2015–2023 - provide housing options to housing projects on a case-by-case basis as projects are processed through the Resource Management Department.

Funding Source: General Fund.

C.3 Zoning Codes and Development Standards to Encourage and Facilitate Alternative Housing. To create opportunities for the private marketplace to produce additional affordable housing for extremely low-, very low-, low-, and moderate-income households, including farmworkers and the elderly, the County will continue to implement building and zoning codes to accommodate manufactured dwelling units and secondary dwelling units in all residential zoning districts by right. Based on trends in the last five years the County is projecting the market will construct approximately 41 additional secondary dwelling units and 14 manufactured homes during the RHNA projection cycle.

Responsibility: Resource Management.

Target Date: 2015–2023; continue to allow manufactured housing and second units.

Funding Source: General Fund.

C.4 Preservation of Existing Assisted Housing Units. Currently, there are no lower-income assisted units in the Unincorporated area of Solano County. Should other publicly assisted affordable housing units be produced during the Housing Element planning period and become at risk of conversion to market rate within 10 years of the beginning of the next planning period (2025), the County will monitor its status, identify any units at risk of conversion to market rate, and work proactively to preserve them. The County would work with interested affordable housing developers and make preservation activities a priority use of available federal, state, and local financing sources in cases where it is more cost-effective to preserve affordable units than to build replacement affordable units.

Responsibility: Resource Management.

Target Date: 2015–2023; as projects are built and have affordability covenants on them, they will be monitored.

Funding Source: General Fund.

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C.5 Program Partnerships – Affordable Housing. The County will work to ensure coordination between County and other public and private housing assistance programs and affordable housing developers, including coordinating resources for affordable housing production.

The County will continue to work with the City of Vacaville Housing Authority to administer the Section 8 program. The County may also apply for Mortgage Credit Certificates (MCC) from the California Debt Limit Allocation Committee, with the program administered by the City of Fairfield for first-time homebuyers.

Responsibility: Resource Management and City of Vacaville Housing Authority for Section 8 administration and City of Fairfield for first-time homebuyer program. The County will annually report to the Board of Supervisors on Section 8 program accomplishments.

Target Date: 2015–2023; continue to apply for funding as it becomes available, and as demand warrants.

Funding Source: General Fund.

C.6 Housing Assistance Outreach – Affordable Housing. The County will notify the public of available affordable housing programs in coordination with city housing authorities and other public and private agencies.

Responsibility: Resource Management and Housing Authority.

Target Date: Notify public of available programs through flyers and the newspaper on a quarterly basis. Information on the County's website will be updated quarterly or as needed.

Funding Source: General Fund.

D. Special Housing Needs and Equal Housing Opportunity

Particular groups within unincorporated Solano County have special housing needs. These include the elderly, the disabled (including those with developmental disabilities), large family households, female heads of households, military, farm laborers, and the homeless. To ensure that adequate housing is available for all the citizens of the county, particular attention will need to be given to these groups.

A major constraint to meeting special housing needs is that the particular housing problems of these groups are not easily identifiable and are thus not readily perceived by the public. Data from the Census and other sources presented in **Appendix A** (Housing Needs Assessment) provides some indication of the nature and extent of the housing problems facing these groups.

The County has instituted programs to address some of the needs of special groups. With respect to housing needs of the elderly and disabled, the county instituted changes to its zoning code to allow a secondary dwelling unit to be established in certain zoning districts, in addition to the principal single-family residence which can be used for the elderly and the disabled.

In expanding the existing programs and developing new programs, special consideration must be given to the unique problems faced by each of these groups. Providing assistance to the elderly and handicapped may best be accomplished by administration of available funding through the Solano County Housing Authority. The elderly and handicapped often are in need of easy access to public transportation and commercial and recreational facilities, and additional supporting facilities and services. These facilities for seniors and disabled are generally not available in the Unincorporated area.

In addressing the problems of large family households and female-headed households, special consideration should be given to these groups under low-income housing assistance programs. In addition, the private sector should be encouraged to give full consideration to the needs of large families in their developments.

The County has enacted provisions for agricultural employee housing. The Agricultural Advisory Committee recommended that additional agricultural employee housing be provided as a manufactured dwelling unit on a temporary basis through a use permit approval process. The Committee felt the proposed agricultural employee housing provisions would best meet farmworker housing needs in Solano County. Under the zoning code, agricultural employee housing is subject to the condition that the property owner and lessee employ the occupants of the dwelling, that they have rent deducted from their wages, and that the unit meets setback requirement. There are no additional site requirements, design standards, or development standards required other than meeting building code requirements for foundations and providing adequate sewage disposal and water facilities for the unit. Further amendments to the Agricultural Zoning District allow farmworker housing under a permit from the California Department of Housing and Community Development as an allowed use within the zoning district without requiring a use permit from the County. The County will provide assistance, as needed, to the farming community in obtaining funding and establishing farmworker housing. In addition, the proper maintenance of private migrant farm labor camps through periodic onsite inspection programs is ensured by the State Department of Housing and Community Development through its inspection and enforcement program. The County also can provide assistance in obtaining loans and grants for the rehabilitation or establishment of new farm labor housing as needs are demonstrated.

In cooperation with cities and other agencies, Solano County helped establish the Continuum of Care and Solano Safety Net Consortium – Community Action Agency to address special housing needs in the county. This organization is a collaborative of local service agencies from

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the public and private sectors that provide services to the homeless and others in need of emergency and transitional housing. The purpose of the agency is to coordinate service delivery and resources. The County will continue to coordinate and expand its homeless programs through this public/private collaboration.

The County supports fair housing through enforcement of equal opportunity provisions under County-operated housing programs. Solano County Housing Authority contracts with the City of Vacaville Housing Authority to provide housing services to the Unincorporated area. Part of the services provided by the City of Vacaville is assistance to the County in promoting fair housing opportunities through Vacaville's Housing Counseling Program. The City's HUD-certified Housing Counseling Program provides information and referral to landlords, tenants, and homeowners on a number of topics including landlord/tenant disputes, finding and securing housing, housing discrimination (including referral to the appropriate investigative and enforcement entity), and foreclosure prevention counseling to residences in the Unincorporated area. The Housing Counseling Program will actively promote fair housing education by sponsoring in partnership with others fair housing workshops, landlord training and tenant credit repair workshops and tenants' rights clinics. Because of the high percentage of Spanish-speaking households in the Unincorporated area, special workshops have and will continue to be conducted for Spanish speakers.

Objective

D. Provide housing to meet the special needs of the elderly, disabled (including developmentally disabled), large family, single female-headed, homeless, military, and farmworkers.

Policies

D.1 The County shall support and comply with Federal Civil Rights law on discrimination in housing on the basis of ethnic background, age, disability, or sex.

D.2 The County shall give priority in providing housing assistance to those groups with demonstrated special needs, including elderly, disabled (including developmentally disabled), large family households, single female-headed of households, extremely low-income households, and farmworkers.

D.3 The County shall continue to coordinate and monitor emergency shelters through the Continuum of Care and Solano Safety Net Consortium – Community Action Agency.

D.4 The County shall support emergency housing programs through existing public and private service agencies. The County shall coordinate and support the provision of both emergency shelter and transitional housing to respond to the housing needs of the existing homeless population and those most at risk of becoming homeless.

Programs

D.1 Farmworker Housing – Production. The County will seek to coordinate programs and funding from state and federal programs through the Dixon Housing Authority. The County will work with the Dixon Housing Authority to explore opportunities for expanding the Dixon Migrant Center as demand necessitates. The County, through the County Housing Authority, will provide assistance to the farming community and housing developers in obtaining loans and grants and processing applications for the rehabilitation and/or establishment of new farm labor housing under USDA Rural Development and California Department of Housing and Community Development (HCD) programs and other funding sources that may become available. The County will develop an informational brochure explaining options, the permitting process, and possible funding sources for the development of farmworker housing. The County will also contact agricultural stakeholders and the nonprofit community to discuss possible options for locating suitable and available sites for farmworker housing by the end of 2016. The County will then assist nonprofit groups and stakeholders to pursue funding resources, water and sewage availability, and entitlements if necessary. In addition, the County will formulate and provide development incentives as funding permits for the provision of farmworker housing and expedite the permitting process for all farmworker housing projects to the extent feasible.

Farmworker housing, permitted by HCD, is an allowed use without the necessity of obtaining a use permit from the County. HCD will continue site inspections of migrant farm labor camps to ensure proper maintenance.

Responsibility: Resource Management and HCD.

Target Date: Ongoing; develop an informational brochure explaining options, permitting process, and possible funding sources for the development of farmworker housing by June 2016. The County will reach out to stakeholders to discuss the demand for farmworker housing and whether pursuit of funding for this type of housing is needed, at least annually, as part of regular meetings with the Ag Advisory Committee and the Farm Bureau.

Funding Source: As funding permits, General Fund, USDA Rural Development, and state CDBG and HOME funds.

D.2 Addressing Special Housing Needs. The County has a number of incentives to encourage the production of housing to meet the needs of special needs populations, such as the elderly and persons with physical and developmental disabilities. These include modification of development standards. The County will seek funding for special groups with specific demonstrated needs through federal, state, and local housing assistance programs through the Solano County Housing Authority. Where unmet needs are demonstrated, the County will give

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preference in its funding decisions to projects addressing special housing needs.

Through the Continuum of Care and Solano Safety Net Consortium – Community Action Agency (SSNC-CAA), the County will continue to cooperate and work with other governmental and non-governmental organizations to encourage, promote, and facilitate the provision of emergency shelters, transitional housing, and housing to meet other special housing needs. The SSNC-CAA receives funding from CDBG, HUD, FESG, EHAP, United Way, and other sources. Funds are used to provide housing assistance (in the form of rental assistance), hotel vouchers, tenant rights assistance, credit clean-up, budget sessions, job developing, etc. These services are in place to keep housing clients in their homes.

Through the collaborative efforts of the Continuum of Care, the County will continue to assess the magnitude of the homeless problem and to coordinate and promote housing assistance programs for the homeless. The County will promote the use of community facilities and continue to work with service agencies to provide short-term emergency housing for the homeless (rotating church space, hotel/motel vouchers, armories, public spaces, emergency shelters for natural disasters, special need shelters such as battered women's shelters, sober housing, etc.). The County will continue to encourage and work with and assist nonprofit housing development corporations to promote, assist, or sponsor housing for the homeless. The County will also explore the feasibility of using its CDBG to provide seed money to assist nonprofit agencies in these efforts. Through its Zoning Code, the County will continue to provide opportunities for sites to accommodate emergency shelters and transitional housing in all of its residential zoning districts through the use permit process and to accommodate farmworker housing in the Agricultural zoning districts.

Responsibility: Resource Management, Health and Social Services, Housing Authority, Continuum of Care and Solano Safety Net Consortium – Community Action Agency.

Target Date: Identify funding opportunities annually and/or as funding becomes available.

Funding Source: General Fund, HUD, FESG, EHAP, CDBG, United Way, Federal Housing Opportunities for Persons with AIDS, California Child Care Facilities Finance Program, and other state and federal programs designated specifically for special needs groups.

D.3 Housing Assistance Outreach – Special Housing Needs. Consistent with state law, the County has identified sites that can accommodate development of new farmworker housing, new emergency shelters, and new transitional housing. In addition to the primary residence on parcels under Agricultural zoning, the County provides for a "secondary dwelling unit" as an allowed use by right for either farmworker or non-farmworker housing. For additional housing above the two units allowed by right, the County's agricultural zoning districts also includes provisions for temporary

manufactured dwelling units for agricultural employee housing through the use permit process. The zoning code has been amended to allow farmworker housing permitted by the California Department of Housing and Community Development by right without a use permit.

In addition, the County will notify the public of available special housing needs and emergency shelter assistance programs and equal housing opportunity programs in coordination with the Continuum of Care /SSNC-CAA, city housing authorities, and other public and private agencies. The County will develop an informational brochure explaining options, the permitting process, and possible funding sources for the development of farmworker housing.

Through the Solano County Housing Authority contract with the City of Vacaville Housing Authority, the County will continue to provide fair housing services in the unincorporated area. In coordination with the City of Vacaville Housing Authority, the County will continue to assist the public in matters concerning fair housing issues and referrals to appropriate investigative and enforcement agencies. The County will promote equal housing opportunities through the distribution and posting of fair housing information in coordination with other agencies at public building and facilities and other locations throughout the entire county. Through the Housing Counseling Program, the County will continue to promote fair housing education through fair housing workshops, landlord training and tenant credit repair workshops and tenants' rights clinics at various locations throughout the county.

To comply with the Health and Safety Code Section 17021.6 (a section of the state Employee Housing Act), the County will amend its zoning code to treat employee housing consisting of no more than 12 units or 36 beds as an agricultural use and permitted in the same manner as other agricultural uses in the same zone in zones where agricultural uses are permitted.

Responsibility: Resource Management, Solano County Housing Authority.

Target Date: Develop an informational brochure explaining options, permitting process, and possible funding sources for the development of farmworker housing by June 2016. Amend the zoning code to address Health and Safety Code Section 17021.6 by December 2015.

Funding Source: General Fund, Continuum of Care, SSNC-CAA – Solano County Housing Authority.

E. Governmental and Non-Governmental Housing Constraints

The Housing Needs Assessment found that Solano County does not face any unusual non-governmental constraints to housing. As with most other jurisdictions in this part of the state, the unincorporated part of Solano County has experienced increasing housing land costs and increasing costs for building materials, services, and labor, which have contributed to increasing housing costs.

In terms of governmental constraints, the Housing Needs Assessment observed that processing and permit procedures, fees and exactions, site improvement requirements, and building codes and enforcement in the unincorporated parts of Solano County are in line with standard practices in other communities; do not impose any unnecessary burdens on new residential development; and are generally processed in a timely manner. The Housing Needs Assessment did note that a general scarcity of sites for urban density residential development in the Unincorporated area can be viewed as a form of governmental constraint on housing production. This situation reflects the consensus among Solano County and the cities that urban development should be directed to the cities, where services and infrastructure appropriate to serve urban development are located, preserving the unincorporated areas primarily for continued agricultural and open space uses. LAFCO policies and requirements under the Cortese-Knox-Hertzberg Act limit the ability of cities to extend services to unincorporated areas unless annexed to the city. This further limits the ability of the County to provide necessary services to support residential development in the Unincorporated area.

Objective

E. Where consistent with Solano County's local "smart growth" philosophy to direct most development to the cities, minimize constraints to the production of housing within the unincorporated areas of the County where limited residential development is appropriate.

Policies

E.1 Consistent with the requirements of SB 520, the County will remove constraints and allow for "reasonable accommodations" for the disabled in housing development standards.

Individuals with disabilities may request exceptions to land use policies and procedures and development standards in order to receive reasonable accommodation to achieve accessibility.

Applicants may request an administrative permit or waiver to continue or expand a nonconforming residential use or to construct accessibility improvements within a yard or setback area. There will be a minimal fee or no fee to apply for a reasonable accommodation.

The administrative permit review process will include application of the following decision-making criteria:

The request for reasonable accommodation will be used by an individual with a disability protected under fair housing laws.

The requested accommodation is necessary to make housing available to an individual with a disability protected under fair housing laws.

The requested accommodation would not impose an undue financial or administrative burden on the County.

The requested accommodation would not require a fundamental alteration in the nature of the County's land-use and zoning program.

The requested accommodation would reduce barriers and increase visitability on the site.

The County publishes information on its permit procedures in the form of brochures that are available at the permit counter in the Resource Management Department and on the County's website. County staff is available at the permit counter to answer questions about procedures for special accommodations under the County's Zoning Code.

A decision on the administrative permit or waiver for a reasonable accommodation may be appealed to the Planning Commission.

E.2 Where possible, the County will remove constraints to the development of housing.

Programs

E.1 Reasonable Accommodation for Persons with Disabilities. The County provides an administrative process for reasonable accommodations on a case by case basis per **Policy E.1** above. In addition, any building permit applications involving employers require that the site, facility, and all buildings comply with accessibility standards. The Building Division is mandated to enforce the most restrictive of either Americans with Disabilities Act or the California accessibility standards. In addition the County will make information available about the reasonable accommodation procedure at the public counter in the Resource Management Department.

Responsibility: Resource Management.

Target Date: Make information available at the public counter within three months of Housing Element adoption.

Funding Source: General Fund.

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E.2 Parking Requirements. The County has revised its parking standards to allow the Zoning Administrator to adjust parking requirements based on site-specific constraints and conditions. The County will consider revising its parking standards to include a sliding scale based on bedroom type (i.e., studio and one-bedroom). The County will continue to annually review its parking requirements to ensure they do not constrain the development of affordable housing.

Responsibility: Resource Management.

Target Date: Annually review standards. Consider any need for revisions to allow a sliding scale. If a need is identified, make revisions within one year of identifying the need.

Funding Source: General Fund.

F. Housing Location, Density, and Timing

In 2008 Solano County completed a comprehensive update to the General Plan. It set forth specific policies as to the location, density, and timing of future residential development in the Unincorporated area. Residential development has occurred in the Unincorporated area predominately on lots varying from 1 to 5 acres. The passage of Proposition A by a vote of the people of Solano County, as extended by adoption of the Orderly Growth Initiative by the Board of Supervisors when it qualified for the ballot in 1994, reinforced many of the previous General Plan policies with regard to the location and timing of future development in the County. The Orderly Growth Initiative was essentially extended to 2028 with the voter-approved Measure T as part of the 2008 General Plan Update. Limited growth is directed to existing planned residential areas, with new large scale residential developments directed to the cities. The General Plan allows for redesignation of agricultural and open space areas by the County to residential uses only under limited conditions. Consequently, the cities and County must carefully coordinate their planning efforts in relationship to the location and timing of future development.

Objective

F. Continue to provide properly timed residential development in a pattern which is consistent with County economic, social, and environmental needs.

Policies

F.1 Rural residential development within the unincorporated County shall be accommodated on 2.5- to 10-acre building sites zoned Rural Residential.

F.2 Rural residential development in areas without public water systems shall occur on building sites of 5 acres or larger.

F.3 Rural residential development in areas with public water systems shall occur on building sites of 2.5 acres or larger.

F.4 Urban density single-family development and multi-family development in the unincorporated County shall be located in those areas with infrastructure and services best suited to provide the level of services necessary to support such urban development, such as Homeacres.

F.5 Clustering of development meeting overall density standards shall be applied in the Unincorporated area when necessary to preserve open space and environmental quality, to provide for the efficient delivery of services and utilities, and to mitigate potential health and safety hazards.

F.6 Clustering of development meeting overall density standards shall be applied in the Unincorporated area to protect farmable units in agricultural areas.

F.7 The County shall provide for residential development in an orderly manner within the time frame of the General Plan and the goals and objectives of the County capital improvement program.

F.8 The County shall phase future residential development giving first priority to those undeveloped areas zoned and designated for residential use and where residential development has already been established; second priority to undeveloped areas designated but not zoned for rural residential use and where rural residential development has already been established; and third priority to those undeveloped areas designated for rural residential use but thus far undeveloped.

F.9 The County shall promote the development of emergency shelters and homeless housing in locations in close proximity to the homeless population and where essential services are readily available to the homeless community.

F.10 The County shall ensure that policies and programs of the Solano County Housing Element are consistent with other elements of the County's General Plan.

F.11 The County shall seek to achieve coordination between the County and the cities to ensure the proper location and timing of future residential development.

F.12 The County shall not oppose the annexation of urbanized unincorporated areas adjacent to cities where County housing assistance is provided, as long as annexation is not contrary to the wishes of a majority of the affected residents.

G. Public Facilities and Services

The County recognizes that the provision of essential public facilities and services is an important and necessary prerequisite to the maintenance of a satisfying living environment. The extent and level of services and facilities to be provided are important factors in determining Solano County's housing role. Presently, the County's housing role is primarily that of a regulator. The County attempts to ensure that a home is constructed with due consideration for the resident's health, safety, and welfare and to ensure that residents are not adversely affected by the actions of neighbors. The County has developed a capital improvement program for the Homeacres community. The program includes improvements to drainage facilities, waterlines, and roadways. The program is funded under the City of Vallejo Southeast Redevelopment District through an agreement with the Vallejo Redevelopment District. While the redevelopment agencies have been dissolved, some funds remain that could be used for the capital improvement program. In addition, the County may secure other funds to continue the program.

The County recognizes its responsibility to provide certain health and safety services such as sheriff and fire protection and to provide and maintain certain public improvements with various communities as needs are identified, including road improvements, storm drainage, and on occasion other improvements. On the other hand, the County has traditionally held that it should not provide urban services such as treated water or sewers. As a result, development within the unincorporated area has been primarily self-sufficient. While some development has been allowed to occur where limited urban services were provided by cities and special districts, current policy maintains that "what is urban should be municipal," meaning that development requiring urban services should occur within an incorporated city. This position was taken in the belief that cities can provide urban services more efficiently. This policy is at the heart of the General Plan policies which encourage city-centered growth with residential development provided in close proximity to employment and commercial centers minimizing urban sprawl, travel distances, energy consumption, and noise and air pollution.

Public facilities and services policies call for a continuation of rural residential development which is primarily self-sufficient with on-site septic and water systems. The policies also recognize that in some areas designated for rural residential use, ground water supplies may be limited or unavailable. Therefore, in implementing the County's housing program, consideration should be given to identifying present water supply and future water needs of designated residential areas. Where limited water supplies are found to exist, alternative solutions will need to be explored. In other areas where ground water quality problems exist, alternative water supplies may be required. In areas with poor soil conditions, increased residential populations may reach a point where individual septic systems can no longer be relied upon and some form of community sewage disposal may be required. Where changes in water and sewer systems are required, steps should be taken to ensure the protection of surrounding open space and agricultural lands. Care must also be exercised to ensure adherence to all other General Plan policies including timing of development.

The County must also evaluate the cost of new residential development and its impact on County services as opposed to the revenues generated from such development. As part of this analysis, consideration should be given to any additional services or facilities which might be required due to increases in residential densities that are made possible by future upgrades to water or sewer systems. In addition, consideration should be given to more specifically identifying areas that need improved public facilities and services traditionally provided by the County. Such mechanisms as a capital improvement program can provide a useful tool for more specifically identifying and prioritizing such needs.

Objective

G. Provide for residential development that is generally self-sufficient in regard to water supply and sewage disposal, requiring only minimal public facilities and services essential for health, safety, and welfare.

Policies

G.1 Rural residential development should be designed and located in a manner that minimizes the need for increased County services.

G.2 Domestic water for rural development shall be provided principally through on-site individual wells. When individual well systems in an area of the unincorporated County become marginal or inadequate for serving domestic uses, public water service may be permitted in conformance with the General Plan. In such cases, public water service shall be provided and managed through a public agency. If lands proposed for water service are not within the boundaries of an existing public water agency, the Board of Supervisors shall, as a condition of development, designate a public agency to provide and manage the water service. Water facilities shall be designed to provide water service only to the developed areas and those designated for potential development. Such facilities shall be designed to prevent any growth-inducing impacts on adjoining designated agricultural and open space lands.

G.3 The County shall continue to work with the local school districts in implementing mechanisms and procedures for mitigating impacts on school facilities resulting from future County development.

Programs

G.1 Capital Improvements. As funding resources allow, the County shall continue ongoing implementation of capital improvements including drainage, waterline, and roadway improvements in the Homeacres community.

Responsibility: Resource Management.

Target Date: Ongoing.

Funding Source: Redevelopment set-aside funds, grant funding.

H. Environmental Quality

A necessary prerequisite to providing adequate housing is the provision and maintenance of a satisfying living environment. Several of the unincorporated communities and areas designated for future residential development face particular environmental problems. During the planning period, the County has entered into agreements for garbage and recycling services and established mandatory garbage collection within the County's residential zoned areas. As part of the services, landfill passes are provided and community cleanup events have been implemented.

Areas of blight can be found in several unincorporated communities. Environmental problems such as weeds, litter, trash piles, abandoned autos, abandoned dwellings, substandard and dilapidated structures, and inadequate or deteriorated public facilities are prevalent. Ordinances relating to the abatement of litter, weeds, and abandoned autos for health and safety reasons have been adopted by the County. While redevelopment project areas have been established in some of these communities to address many of these blighting conditions, the County does not have a definite program for improving the environmental quality in many of these areas. In addressing the problems of community blight, the County should seek to establish cooperative programs between public or private agencies for the improvements of the environmental amenities in its residential communities.

Environmental constraints need to be taken into account in the location of future residential development in the county. Essential agricultural lands are the principal environmental constraint to the location of future residential development. County agricultural policies are directed to preserving essential agricultural lands for strictly agricultural uses. In addition, environmental constraints relating to geologic hazards, areas of unstable soils, fire hazards, flood hazards, noise and scenic views, and community buffers must be considered when siting future residential development, in order to preserve the County's environmental amenities and to protect the health and safety of Solano County residents.

Objective

H. Enhance and preserve the environmental quality of residential areas.

Policies

H.1 The County shall support programs which seek to reduce community blight.

H.2 The County shall seek to preserve the rural character, flavor, and identity of its residential communities.

H.3 The County shall encourage the design and construction of residential dwellings that minimize the adverse visual, social, and environmental impacts upon the residents of the dwellings and the surrounding community.

H.4 The County shall ensure consistency between residential designated areas in the General Plan and residential zoning districts.

Programs

H.1 Blight Removal. The County will continue to utilize HOME funds to upgrade dilapidated housing for qualified homeowners, thus helping to eliminate future potential blight concerns.

Responsibility: Resource Management.

Target Date: Apply for HOME or CDBG funds annually.

Funding Source: General Fund.

H.2 Architectural Review. The County will continue to implement architectural review to ensure future development within rural communities is harmonious with existing development.

Responsibility: Resource Management.

Target Date: 2015–203; ongoing as projects are processed through the Resource Management Department.

Funding Source: General Fund.

I. Energy Conservation

In 2008, Solano County included an Energy Resources and Conservation section as a part of the Solano County General Plan update. The primary purpose of the Energy Resources section is to identify and document the energy needs and problems in the Unincorporated area; establish energy policies, strategies, and programs to address the identified problems and need; and promote public awareness of energy conservation.

The average Unincorporated area household uses more electrical energy than the average incorporated area household because (a) there is a higher proportion of single-family homes, which tend to be larger and consume more energy for heating, cooling, and other domestic use than multi-family units; (b) the newer homes are larger than newer homes in the incorporated areas; and (c) additional electricity is needed to pump household water in Unincorporated areas. The highest potential for energy use conservation is in a heated swimming pool which can consume more energy than any other residential use. If solar energy were used for pool heating, substantial amounts of fossil fuels could be conserved.

To meet the County's conservation goals, some of the conservation techniques which could be used include weather stripping and insulation techniques, shading techniques (such as wider eaves, exterior shutters, shades, and awnings), and wind deflectors (such as landscaping, beams, screens, and fences). Also, architectural techniques which take advantage of site orientation and window placement to maximize winter heat gain and minimize summer heat gain could be applied. Among these techniques, weather stripping and increased insulation could be particularly effective retrofits for existing older buildings.

Housing Element

Objective

I. Promote energy conservation in new and existing residential units.

Policies

I.1 The County shall encourage the use of siting, construction, and landscaping of structures to minimize energy consumption in housing.

I.2 The County shall encourage improvements in the energy efficiency of existing residential structures through the installation of cost-effective conservation measures.

I.3 The County shall promote reduction of energy use and cost through energy conservation assistance programs for low-income households.

Programs

I.1 Energy Conservation Outreach. The County will continue to have representation on the Green Building Committee, made up of building officials, the Building Standards Commission, the California Energy Commission, and the CA Building Officials Association. The committee will be doing public outreach by explaining to local agency building officials, staff, developers, contractors, architects, and engineers the Green Building program and greenhouse gas reduction program.

Responsibility: Resource Management.

Target Date: Quarterly public outreach efforts.

Funding Source: General Fund.

I.2 Standards and Guidelines for Energy Efficiency and Conservation. The County will ensure that all new residential construction meets or exceeds the state Title 24 standards for energy efficiency. The County will continue to implement provisions of the California Solar Rights Act of 1978 and the state Solar Shade Control Act through the County's subdivision ordinance to ensure that solar access is protected in major and minor subdivisions in residentially zoned areas. The County will provide staff assistance, as needed, with site planning, landscaping, and vegetation plantings for new residential units.

Responsibility: Resource Management

Target Date: Ongoing

Funding Source: General Fund

I.3 Energy Conservation Assistance Programs. The County will continue to partner with Pacific Gas and Electric (PG&E) on the Energy Watch program. The County is also cooperating with local cities on the Rising Sun program which will provide residents with no-cost energy and water conservation services. The County may also consider partnering with PG&E on other energy-saving programs such as the California Alternate Rates for Energy (CARE), the Relief for Energy Assistance through Community Help (REACH) and the Family Electric Rate Assistance (FERA). The County will also work with PG&E to encourage existing residents to participate in energy-efficiency retrofit programs.

Responsibility: Resource Management.

Target Date: Ongoing, as projects are processed through the Resource Management Department.

Funding Source: General Fund.

Quantified Objectives

Based on the policies and actions outlined above, the following objectives represent a reasonable expectation of the maximum number of new housing units that will be developed, rehabilitated, or conserved and the number of households that will be assisted over the next eight years. The County should be able to facilitate the construction of 94 new units, assist with the rehabilitation of five units, and conserve 51 units between 2014 and 2022.

Table 1
Summary of Quantified Objectives

Task	Income Level					
	Extremely Low	Very Low	Low	Moderate	Above Moderate	Total
Potential New Construction ¹	13	13	11	18	39	94
Rehabilitation ²	0	0	5	0	0	5
Preservation ³	0	0	0	0	0	0
Conservation ⁴	0	51	0	0	0	51
Total	13	64	16	18	39	150

Source: Solano County 2014

Notes:

- ¹ Remaining RHNA for the planning period (January 1, 2014 through October 31, 2022). Any quantified objectives for new construction included in individual programs are included in these numbers.
- ² The County plans to use HOME/CDBG/local funds to provide loans to rehabilitate housing units.
- ³ Currently there are no at-risk projects in the Unincorporated area of the County.
- ⁴ These 51 units represent the 51 Housing Choice (Section 8) vouchers currently in use in unincorporated Solano County.

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A HOUSING NEEDS ASSESSMENT

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INTRODUCTION

State law requires that in preparing its Housing Element, each California jurisdiction conduct a Housing Needs Assessment that includes analysis of local housing, economic, and demographic conditions and analyzes the governmental and non-governmental constraints that discourage housing development. The Housing Needs Assessment should also assess the demand for housing for households at all income levels and for housing suitable for special needs populations. For Solano County and other counties, the Housing Needs Assessment focuses on the unincorporated area. By providing this required information as background for the Housing Element update, the Housing Needs Assessment will assist Solano County residents, stakeholders, and policy-makers in developing rational goals and programs that can effectively address housing problems within the unincorporated area.

To facilitate an understanding of how the characteristics of the unincorporated parts of Solano County (Unincorporated area) are similar to or different from other nearby communities, this Housing Needs Assessment presents data for the Unincorporated area alongside comparable data for all of Solano County (including the Unincorporated area). According to the County's Department of Resource Management, the County comprises 909.4 square miles, of which 761 square miles are unincorporated.

This Housing Needs Assessment incorporates data from numerous sources. The data packet provided by the Association of Bay Area Governments (ABAG) contains much of the information required for the Housing Needs Assessment of this Housing Element and is the primary source of data for this document. Where additional information is required, the US Census, which is completed every 10 years, is the preferred data source, as it provides the most reliable and in-depth data for demographic characteristics of a locality. This report uses the 2010 US Census for current information and the 2000 US Census to assess changes since the year 2000. The California Department of Finance (DOF) is another source of data that is more current than the Census. However, the DOF does not provide the depth of information that can be found in the 2010 US Census. Whenever possible, the ABAG data packet, DOF data, and other local sources were used in the Housing Needs Assessment in order to provide the most current profile of the community.

The 2010 US Census did not collect information in several categories that are required for the Housing Needs Assessment. Where this is the case, historical DOF data is used. Where DOF data is not available, information from the 2000 US Census is retained. In cases where this is not feasible or useful, this assessment references US Census Bureau American Community Survey (ACS) data. The ACS provides estimates of numerous housing-related indicators based on samples averaged over a five-year period. Whereas the US Census provides complete counts of various demographic indicators, the ACS provides estimates based on statistically significant samples. Due to the small size of samples, the estimates reported by the ACS have large margins of error. Where ACS data is used, the numbers should not be interpreted as absolute fact, but rather as a tool to illustrate general proportion or scale.

The Housing Needs Assessment comprises four sections. The first section focuses on demographic information, including population trends, ethnicity, age, household composition, income, employment, and housing characteristics for the Unincorporated area of Solano County.

Appendix A: Housing Needs Assessment

The third section centers on the governmental and non-governmental constraints to housing development in Solano County. The County established planning, zoning, and building standards that guide residential development patterns and influence housing availability and affordability. There are also numerous non-governmental constraints, such as environmental and housing market conditions, that affect the location, availability, affordability, and type of housing that is constructed within the county. Non-governmental constraints include such factors as the availability of financing, land cost, and construction costs.

The fourth section describes the County's resources, future development potential, and energy conservation opportunities.

HOUSING NEEDS ASSESSMENT

Population Characteristics

This section presents information regarding changes in the population characteristics in the Unincorporated area since 2000.

Population

According to the DOF, as of 2014, the Unincorporated County had a population of 19,190 compared to the total county with a population of 424,233. **Table 1** compares the population counts between the Unincorporated area, the incorporated cities in Solano County, and Solano County as a whole using 2000 and 2010 Census Data in addition to the 2014 DOF data. The Unincorporated area had a 2 percent population increase from 2010 to 2014, increasing from 18,834 to 19,190 persons. The County overall grew 3 percent from 2010 to 2014.

Table 1
Population Growth Trends

Jurisdiction	2000 Population	2010 Population	Percentage Change 2000–2010	2014 Population	Percent Change 2010–2014
Solano County Total	394,542	413,344	5%	424,233	3%
Benicia	26,865	26,997	.5%	27,454	2%
Dixon	16,103	18,351	14%	19,005	4%
Fairfield	96,178	105,321	10%	110,018	4%
Rio Vista	4,571	7,360	61%	7,934	8%
Suisun City	26,118	28,111	8%	28,549	2%
Vacaville	88,625	92,428	4%	93,613	1%
Vallejo	116,760	115,942	-1%	118,470	2%
Unincorporated area	19,322	18,834	-3%	19,190	2%

Source: 2000 Census, 2010 Census, 2014 DOF

Households

A household is defined as a person or group of persons living in a housing unit, as opposed to persons living in group quarters, such as dormitories, convalescent homes, or prisons. As shown in **Table 2**, the number of households in the Unincorporated area increased by 2 percent between 2000 and 2010. The County as a whole experienced a 7 percent increase in households between 2000 and 2010.

Table 2
Household Growth Trends

Jurisdiction	2000 Households	2010 Households	Percentage Change 2000–2010
Solano County Total	130,403	141,758	7%
Benicia	10,328	10,686	3%
Dixon	5,073	5,856	15%
Fairfield	30,870	34,484	12%
Rio Vista	1,881	3,454	83%
Suisun City	7,987	8,918	12%
Vacaville	28,105	31,092	11%
Vallejo	39,601	40,559	3%
Unincorporated area	6,558	6,709	2%

Source: 2000 Census, 2010 Census

Projected Population Growth

As shown in **Table 3**, ABAG anticipates the rate of population growth in the Unincorporated area to be slightly less than Solano County. The percentage change between 2010 and 2020 for the Unincorporated area is expected to be a 7 percent increase, while Solano County is expected to have a 9 percent increase. Future growth for the Unincorporated area will increase approximately 31 percent, or 5,866 residents (between 2010 and 2040), while the County will increase 9 percent, a gain of 98,256 residents between 2030 and 2040. Overall, ABAG anticipates that the Unincorporated area of the county will comprise 5,866 new residents and Solano County will gain 98,256 new residents between 2010 and 2040.

Table 3
Projected Population Growth through 2040

	2010	2020	Percent Change 2010–2020	2030	2040	Percent Change 2030–2040
Unincorporated area	18,834	20,600	9%	22,600	24,700	8%
Solano County	413,344	442,700	7%	475,200	511,600	9%

Source: ABAG Projections 2013

Projected Household Growth

The number of households in the Unincorporated area is expected to grow 8 percent between 2010 and 2020. ABAG projects a slightly lower growth rate in Solano County (6 percent annually). Between 2010 and 2040, ABAG anticipates 1,681 new households in the Unincorporated area, and 26,942 new households in Solano County.

Table 4
Projected Household Growth through 2040

	2010	2020	Percent Change 2010–2020	2030	2040	Percent Change 2030–2040
Unincorporated area	6,709	7,260	8%	7,820	8,390	7%
Solano County	141,758	151,010	6%	160,030	168,700	5%

Source: ABAG Projections 2013

Age Distribution

The distribution of population in the Unincorporated area among the age categories shown in **Table 5** is weighted more toward the older age groups than in the county overall. In 2010, the Unincorporated area had larger concentrations of persons 45 and older compared to the County, representing approximately 49 percent of the Unincorporated area's population compared to 40 percent of the County's overall population. The Unincorporated area also had very similar concentrations of persons aged 15 to 34, accounting for 23 percent of the Unincorporated area's total population and 27 percent of Solano County's total population.

The median age of residents in Solano County in 2010 was 37 years. Data for the Unincorporated area was not available.

Table 5
Change in County Age Distribution, 2010

Age Distribution	Unincorporated area		Solano County	
	Number	Percentage	Number	Percentage
0-14	3,206	17%	82,738	20%
15-24	2,394	13%	59,245	14%
25-34	1,899	10%	54,914	13%
35-44	2,147	11%	54,423	13%
45-54	3,172	17%	63,950	16%
55-64	3,064	16%	51,227	13%
65+	2,952	16%	46,847	11%
Total	18,834	100%	413,344	100%

Source: 2010 US Census

Race and Ethnicity

As shown in **Table 6**, the share of minorities in the Unincorporated area of the county is 20 percent less than the share of minorities in the county as a whole. The share of minorities in the urban areas is much higher than in the Unincorporated area of the county, which explains the differences seen between each area in **Table 4**. The share of the population reporting to be Hispanic/Latino was slightly higher in the Unincorporated area than in the county as a whole. Those reporting to be of Hispanic/Latino origin and white account for 86 percent of the share of the population in the Unincorporated area, which is 21 percent lower than the county as a whole.

Table 6
Race/Ethnicity 2010

Race/Ethnicity	Unincorporated		Solano County	
	Number	Percentage	Number	Percentage
White	11,224	60%	168,628	41%
Black or African American	905	5%	58,743	14%
American Indian or Alaska Native	104	0.5%	1,864	0.5%
Asian	878	5%	59,027	14%
Native Hawaiian or Pacific Islander	121	0.5%	3,243	1 %
Some other race	14	0%	1,4633	0.5%
Two or more races	648	3%	21,020	5%
Hispanic or Latino	4,940	26%	99,356	24%
Total	18,832	100%	413,344	100%

Source: 2010 US Census

Persons per Household

According to the DOF, as shown in **Table 7**, from 2000 to 2014 the persons per household decreased in Solano County from 2.90 to 2.85. The Unincorporated area's average household also decreased in size from 2.85 to 2.80 persons per household.

Table 7
Persons per Household 2000–2014

Year	Unincorporated area			Solano County		
	2000	2014	Percent Change 2000–2014	2000	2014	Percent Change 2000–2014
Persons per Household	2.85	2.80	<-1%	2.90	2.85	<-1%

Source: DOF, 2013; 2000 US Census

Household Characteristics

Household Type

A family is a group of two people or more (one of whom is the householder) related by birth, marriage, or adoption and residing together; all such people (including related subfamily members) are considered members of one family (US Census 2014). As shown in **Table 8**, 74 percent of the households in the Unincorporated area are family households, compared to 72 percent of the population in households in all of Solano County. The higher proportion of family households in the Unincorporated area is likely a function of the limited supply of multi-family homes in the Unincorporated area, which tends to have a higher proportion of non-family households. Data on housing stock composition are discussed in detail below.

Table 8
Household Population Composition 2011

Household Type	Unincorporated area		Solano County	
	Number	Percentage	Number	Percentage
Families	4,957	74%	101,989	72%
Non-Families	1,752	26%	39,769	28%
Total Households	6,709	100%	141,758	100%

Source: 2010 US Census

Household Income

Household income is one of the most significant factors affecting housing choice and opportunity. Income largely determines a household's ability to purchase or rent housing. While higher-income households have more discretionary income to spend on housing, lower- and moderate-income households are limited in the range of housing they can afford. Typically, as the income of a household decreases, the incidence of housing cost burdening and overcrowding increases.

For the purpose of evaluating housing affordability, housing need, and eligibility for housing assistance, income levels are defined by guidelines adopted each year by the California State Department of Housing and Community Development (HCD). For Solano County, the applicable median area income for a family of four in 2014 is \$82,600.

HCD has defined the following income categories for Solano County, based on the median income for a household of four persons.

- Extremely low income: 30 percent and below (\$0 to \$24,800)
- Very low income: 31 to 50 percent of median income (\$24,801 to \$41,300)
- Low income: 51 to 80 percent of median income (\$41,301 to \$65,000)
- Moderate income: 81 to 120 percent of median income (\$65,001 to \$99,100)
- Above moderate income: 120 percent or more of median income (\$99,101 or more)

Appendix A: Housing Needs Assessment

Table 9 shows Solano County's maximum annual income level for each income group, adjusted by household size. This data is used when determining a household's eligibility for federal, state, or local housing assistance and when calculating the maximum affordable housing payment for renters and buyers.

Table 9
Solano County
Maximum Household Income Level by Household Size

Household Size	Maximum Income Level				
	Extremely Low	Very Low	Low	Median	Moderate
1 person	\$17,400	\$28,950	\$45,500	\$57,800	\$69,350
2 persons	\$19,850	\$33,050	\$52,000	\$66,100	\$79,300
3 persons	\$22,350	\$37,200	\$58,500	\$74,350	\$89,200
4 persons	\$24,800	\$41,300	\$65,000	\$82,600	\$99,100
5 persons	\$26,800	\$44,650	\$70,200	\$89,200	\$107,050
6 persons	\$28,800	\$47,950	\$75,400	\$95,800	\$114,950
7 persons	\$30,800	\$51,520	\$80,600	\$102,400	\$122,900
8 persons	\$32,750	\$54,550	\$85,800	\$109,050	\$130,800
Area Median Income (AMI)					
	\$82,600				

Source: HCD, Income Limits 2014

Table 10 shows the distribution of income according to the 2011 Census ACS for the Unincorporated area and for all of Solano County. According to this data, 26 percent of households in the Unincorporated area had incomes below \$50,000. In comparison, for Solano County as a whole, the percentage of households making below \$50,000 was 34 percent. Median household income was unavailable for the Unincorporated area, but for Solano County as a whole the median household income was \$69,914 in 2010. It is important to note that the median incomes reported in **Table 10** are not the same as the state's area median income (AMI) estimate for Solano County, as reported in **Table 9**. Median income in **Table 10** represents the actual median income for household of Solano County in 2011 while HCD's area income represents a four-person household limit with the purpose to evaluate housing affordability and need for 2014.

Table 10
Household Income 2011

Income Category*	Income	Unincorporated area		Solano County	
		Number	Percentage	Number	Percentage
Extremely Low	Under \$24,999	678	10%	21,396	15%
Very Low	\$25,000 to \$49,999	1,120	16%	26,959	19%
Low	\$50,000 to \$74,999	1,379	20%	26,980	20%
Moderate	\$75,000 to \$99,999	882	13%	20,769	15%
Above Moderate	\$100,000 or more	2,918	41%	43,208	31%
Total Households		6,977	100%	139,312	100%
Median Household Income		N/A		\$69,914	
Median Family Income		N/A		\$74,148	
Median Non-Family Income		N/A		\$40,233	

Source: US Census Bureau 2011 ACS, 2010 Census

*Income category based on four-person household income limits from Table 9, income ranges not exact

Employment

Employment has an important impact on housing needs. Different jobs and associated income levels determine the type and size of housing a household can afford. Employment growth in the region typically increases housing demand. **Table 11** highlights employment by industry type, according to 2011 ACS data. The largest industry in both the Unincorporated area and Solano County was Educational services, and health care and social assistance.

Table 11
Employment by Industry Type 2011

Occupation	Unincorporated area		Solano County	
	Number	Percentage	Number	Percentage
Agriculture, forestry, fishing and hunting, and mining	809	9%	2,965	2%
Construction	701	8%	12,905	7%
Manufacturing	765	9%	16,789	9%
Wholesale trade	136	2%	4,982	3%
Retail trade	978	11%	20,825	11%
Transportation and warehousing, and utilities	421	5%	11,656	6%
Information	122	1%	3,832	2%
Finance and insurance, and real estate and rental and leasing	495	6%	13,027	8%
Professional, scientific, and management, and administrative and waste management services	988	11%	16,210	9%
Educational services, and health care and social assistance	1,878	21%	40,607	22%
Arts, entertainment, and recreation, and accommodation and food services	770	9%	15,886	9%
Other services, except public administration	254	3%	7,912	4%
Public administration	490	5%	14,129	8%
Civilian employed population 16 years and over	8,807	100%	181,725	100%

Source: 2011 US Census ACS

The California Employment Development Department (EDD) produces an Occupational Employment and Wage Data spreadsheet by metropolitan statistical area yearly. **Table 12** shows employment projections from 2010 through 2020 as related to job growth for the Vallejo-Fairfield Metropolitan Statistical Area. During the next six years, the Vallejo-Fairfield Metropolitan Statistical Area expects new employment to be concentrated in a variety of occupations ranging from Healthcare Practitioners to Construction and Extraction workers. When comparing these annual incomes to the HCD-estimated Solano County median income for 2014 (\$82,600), only one of the occupational groups is above the median income.

Appendix A: Housing Needs Assessment

Table 12
Vallejo-Fairfield Metropolitan Statistical Area Projections of Employment

Occupation Group	Estimated Employment (2010)	Estimated Employment (2020)	Numeric Change	Annual Salary	Income Group*
Food Preparation and Serving Related	11,560	14,340	2,780	\$19,279	Very Low
Office and Administrative Support	21,020	23,750	2,730	\$37,025	Low
Healthcare Practitioners and Technical Occupations	7,840	10,370	2,530	\$98,621	Above Moderate
Sales and Related	14,370	16,750	2,380	\$24,014	Very Low
Construction and Extraction	7,330	9,370	2,040	\$52,316	Moderate
Health Diagnosing and Treating Practitioners	4,900	6,610	1,710	N/A	N/A
Retail Sales	9,730	11,370	1,640	N/A	N/A
Transportation and Material Moving	9,790	11,380	1,590	\$31,084	Low
Healthcare Support	4,320	5,850	1,530	\$28,674	Very Low

Source: California Employment Development Department, 2013

*Annual salaries correspond to income groups determined using HCD 2014 Solano County income limits for a 1 person household

Table 13 identifies some of the major employers throughout Solano County by Employer Size Class.

Table 13
Major Employers in Solano County

Employer	Employer Size Class
Travis Air Force Base	1,000-4,999
Kaiser Foundation Hospitals	1,000-4,999
North Bay Medical Center	1,000-4,999
Six Flags Discovery Kingdom	1,000-4,999
Westrust-Nut Tree	1,000-4,999
Genentech	1,000-4,999
Touro College	500-999
Vacaville City Hall	500-999
Honeywell	500-999
Flatiron Construction Corp	500-999
Solano County Health & Social	500-999
Sutter Solano Medical Center	500-999
Anheuser-Busch Brewery	250-499
Valero Benicia Refinery	250-499
USDA Forest Service	250-499

Source: California EDD 2014

Jobs and Housing Balance

The analysis of jobs/housing balance is used to measure the degree to which communities and subregions are inducing commuter travel as growth occurs. A community with a balance of jobs and housing has as many jobs as residents that are able to work. For example, a city with 5,000 employed residents requires 5,000 jobs to be in balance. A community is out of balance if it either has more jobs than employed residents or has more employable residents than jobs.

In 2010, the Unincorporated area had a jobs-to-employed residents ratio of 0.92 (8,010 jobs/8,702 employed residents). As shown in **Table 14**, ABAG projects that this ratio will steadily increase through 2040 up to 0.94 (10,870 jobs/11,530 employed residents).

Table 14
Unincorporated area Jobs and Housing Balance

Year	Number of Jobs	Number of Employed Residents	Ratio of Jobs to Employed Residents
2010	8,010	8,720	0.92
2020	9,540	10,250	0.93
2030	10,090	10,760	0.94
2040	10,870	11,530	0.94

Sources: ABAG Projection 2013

Commute

Commute distance is an important factor in housing availability and affordability and is also an indicator of jobs/housing balance. Communities with extended commute distances generally have a poor jobs/housing balance, while those with short average commutes tend to have a strong jobs/housing balance. The burden of the additional costs associated with extended commuting disproportionately affects lower-income households who must spend a larger portion of their overall income on fuel. This in turn affects a household's ability to occupy decent housing without being overburdened by cost. **Table 15** indicates that the vast majority of Solano County residents travel less than 30 minutes from home to work. Commute times for the Unincorporated area were not available.

Table 15
Solano County Commute Times

Travel Time to Work	Number of Employees	Percentage
Less than 30 minutes	103,265	58%
30 to 59 minutes	49,401	28%
60 or more minutes	24,578	14%
Total	177,244	100%

Source: US Census 2012 ACS

Special Needs Groups

Certain groups have greater difficulty in finding acceptable, affordable housing due to special circumstances relating to employment and income, household characteristics, and disabilities, among others. These "special needs" groups include large households, elderly, persons with disabilities, female-headed households, farmworkers, extremely low-income households, homeless persons, and military workers. This section discusses the housing needs facing each group, as well as programs and services available to address the housing needs.

Large Households

Large households are defined as households having five or more persons. According to the 2010 Census, there were 521 large owner-occupied households and 396 large renter-occupied households in the Unincorporated area, representing 19 percent of total owner households and 11 percent of total renter households.

Elderly

The elderly population often requires special housing to accommodate part-time or full-time care and is also more likely to have lower incomes than the population in general. Simple housing requirements can include modifications to doors and steps to improve accessibility and installation of grab bars to make bathing, toileting, and other daily activities safer. Housing unit types such as apartments or condominiums that do not entail high maintenance requirements can also be beneficial as the elderly continue to age and become less able to perform extensive home maintenance work on their own. The elderly are also commonly on fixed incomes while expending more of their income on medical care, meaning that affordable housing is often needed.

Appendix A: Housing Needs Assessment

According to the 2010 US Census, there are approximately 2,952 persons 65 years and older, or 16 percent of the total population, living in the Unincorporated area. According to 2000 Census data, there were 2,306 residents over the age of 65 in 2000. From 2000 to 2010, the senior population in the Unincorporated area grew by approximately 28 percent. The largest growth category occurred in the age range of 85–89 years old, which increased 71 percent over 10 years. With this growth in the upper age groups, increasing needs for supportive housing for the elderly can be expected.

Table 16
Elderly Population

Age	Unincorporated area		
	2000	2010	Percent Change 2000–2010
65-69	772	1,027	33%
70-74	600	737	23%
75-79	479	529	10%
80-84	260	344	32%
85-89	129	220	71%
90-94	52	73	40%
95-99	12	21	75%
100+	2	1	-50%
Total Population over 65	2,306	2,952	28%

Source: 2000 and 2010 US Census

Elderly-Headed Households by Tenure

The 2000 and 2010 Census provides information regarding the number of elderly-headed households by tenure. Elderly-headed households are households where the head of household is 65 years or older. As shown in **Table 17**, in 2000 there were approximately 1,386 elderly-headed owner households; in 2010, that number increased 30 percent to 1,808 households. The amount of renter-occupied households increased from 187 in 2000 to 265 in 2010 (29 percent). The number of owner-occupied households increased 42 percent from 1,199 in 2000 to 1,543 in 2010. The largest change for renter-occupied households occurred in the 85 and over age group with a 100 percent increase. The 85+ age group also saw the highest increase in owner-occupied households with a 75 percent increase.

Table 17
Elderly Household by Tenure

	Unincorporated area		
	2000	2010	Percent Change 2000–2010
Total Renter-Occupied Households	187	265	29%
Age 65-74	108	150	28%
Age 75-84	61	79	29%
Age 85+	18	36	100%
Total Owner-Occupied Households	1,199	1,543	42%
Age 65-74	677	902	34%
Age 75-84	423	468	10%
Age 85+	99	173	75%
Total Households with Elderly Householder	1,386	1,808	30%

Source: 2000 and 2010 US Census

Persons with Disabilities

Disabilities can take many forms and have numerous implications for housing need. Many disabled people can live in conventional housing without any modifications or with only minor modifications, while some disabled people require substantial modifications and/or on-site care to maintain everyday living, while others may need occasional assistance but do not require everyday care. Accessible units can be more expensive to build, including costs for features such as ramps, extra-wide doors, handrails, lowered counters, raised toilets, and a variety of other accessibility enhancements. Compared to the general population, disabled persons are more likely to live alone, earn less, and be homeless. Overall, the disabled population has a higher demand for studios and one-bedroom units and would benefit from accessible and affordable housing.

Table 18 displays the total disabilities reported in the 2000 Census for the Unincorporated area of the county and for the county as a whole. Since there is no DOF, 2010 US Census, or reliable ACS data, 2000 US Census information is used for this analysis. The Unincorporated area of the county had a total of 3,419 persons identified as having a disability and there were 5,960 disabilities reported, of which 73 percent were reported by those under the age of 65.

The 2000 US Census identified six types of disabilities for Solano County's non-institutional population: sensory, physical, mental, self-care, go outside home, and employment.

The data in **Table 18** contains a count for the total disabilities of residents in the county and does not quantify instances in which persons have multiple disabilities. The 2000 Census organized the disabilities into two categories (long-lasting and more than six months) and defines each disability as:

Long-lasting

Sensory – blindness, deafness, or a severe vision or hearing impairment

Physical – a condition that substantially limits one or more basic physical activities, such as walking, climbing stairs, reaching, lifting, or carrying

Lasting six months or more

Mental – difficulty learning, remembering, or concentrating

Self-care – difficulty dressing, bathing, or getting around inside the home

Go outside home – difficulty going outside the home alone to shop or visit a doctor's office

Employment – difficulty working at a job or business

According to the 2000 Census, the Unincorporated area of the county and the county as a whole shared similar proportions of the types of disabilities reported. For example, 38 percent of disabilities reported in the Unincorporated area for the population under 65 were employment disabilities, which was similar for the County as a whole (36 percent).

Table 18
Disabilities Tallied, 2000

Total Disability	Unincorporated area		Total County	
	Number	Percentage	Number	Percentage
Total Disabilities for Ages 5-64	4,353	73%	87,074	74%
Sensory Disability	354	8%	5,817	7%
Physical Disability	897	21%	16,603	19%
Mental Disability	574	13%	12,474	14%
Self-care Disability	279	6%	4,786	5%
Go-outside-home Disability	616	14%	15,976	18%
Employment Disability	1,633	38%	31,418	36%
Total Disabilities for Ages 65+	1,607	27%	30,700	26%
Sensory Disability	354	22%	5,418	18%
Physical Disability	532	33%	10,343	34%
Mental Disability	216	13%	4,140	13%
Self-care Disability	161	10%	3,416	11%
Go-outside-home Disability	344	21%	7,383	24%
Total	5,960	100%	117,774	100%

Source: 2000 US Census

Appendix A: Housing Needs Assessment

Persons with Developmental Disabilities

Senate Bill (SB) 812 requires the County to include the needs of individuals with a developmental disability within the community in the special housing needs analysis. According to Section 4512 of the Welfare and Institutions Code, a "developmental disability" means a disability that originates before an individual attains age 18 years, continues, or can be expected to continue, indefinitely, and constitutes a substantial disability for that individual which includes mental retardation, cerebral palsy, epilepsy, and autism.

Many developmentally disabled persons can live and work independently in a conventional housing environment. More severely disabled individuals require a group living environment where supervision is provided. The most severely affected individuals may require an institutional environment where medical attention and physical therapy are provided. Because developmental disabilities exist before adulthood, the first issue in supportive housing for the developmentally disabled is the transition from the person's living situation as a child to an appropriate level of independence as an adult.

The California Department of Developmental Services currently provides community-based services to approximately 243,000 persons with developmental disabilities and their families through a statewide system of 21 regional centers, four developmental centers, and two community-based facilities. The North Bay Regional Center in Napa, Calif., serves all of Solano County. **Table 19** provides information about Unincorporated Solano County's population of developmentally disabled persons; **Table 20** provides information about those persons' place of residence.

Table 19
Developmentally Disabled Residents by Age, 2014

Solano County Unincorporated	Age Group					
	0-14	15-22	23-54	55-64	65+	Total
	35	>10	>10	>10	>10	39

Source: California Department of Developmental Services, 2014

Table 20
Developmentally Disabled Residents by Residence Type, 2014

Solano County Unincorporated	Residence Type						
	Community Care Facility	Foster Family/ Home	Intermediate Care Facility	Independent Living	Own Home	Other	Total
	>10	>10	>10	>10	37	>10	39

Source: California Department of Developmental Services, 2014

Female-Headed Households

Female-headed single-parent households experience numerous housing problems, including affordability (the individuals are often on public assistance), overcrowding (the individuals often cannot afford units large enough to accommodate their families), insufficient housing choices, and discrimination. According to the 2010 Census, there were 20,888 female-headed households in Solano County; 13,311 of those households had children under 18. The Unincorporated area had 605 female-headed households, of which 335 had children under 18. As shown in **Table 21**, the share of female-headed households was 6 percent higher in the County than in the Unincorporated area.

Table 21
Solano County Single-Parent Households, 2010

Female Headed Household Type	Unincorporated area		Solano County	
	Number	Percentage	Number	Percentage
Female-Headed Households	605	9%	20,888	15%
With Children under 18	335	5%	13,311	9%
Without Children	270	4%	7,577	5%
Female-Headed Householders Under Poverty Line*	64	24%	1,288	17%
Female-Headed Households with Children under 18 below Poverty Line *	117	35%	2,928	22%
Total Families under Poverty Line*	402	6%	8,505	6%
Total Households	6,709	100%	141,758	100%

Source: 2010 US Census,

*Data from 2000 Census due to high margin of error in 2011 ACS Data

Farmworkers

Some farmworkers tend to have special housing needs due to the seasonal nature of their work, along with their need to migrate based on seasonal farmworker demand. Solano County has both a large flux of seasonal workers and a substantial base of year-round farmworkers who reside permanently in the county. The 2012 USDA Census of Agriculture reports that there are 860 farms in Solano County, employing a total of 2,846 workers. Of the 2,846 farmworkers in the County, 1,387 workers (48 percent) work 150 days or more each year. The remaining 52 percent work less than 150 days per year. Larger farms provide the main source of farm employment for farmworkers. According to the Census of Agriculture, 2,010 farmworkers (70 percent) were employed on farms with 10 or more workers. According to the Migrant Child Education Program records there are between 414 and 544 migrant workers throughout Solano County based on current student enrollment in the program. While these estimates are at the county level and are not specifically for the unincorporated area, it is likely the vast majority of farmworkers work within the Unincorporated area where most of the agricultural production in the county takes place. According to the 2010 ACS Census, there were 3,036 persons employed in the agriculture, forestry, fishing and hunting industry in the Unincorporated area of Solano County. This number is significantly larger than the 2010 Census number and may be due to ACS sample

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size issues. Program D.1 is proposed to ensure opportunities for additional farmworker housing choices in Solano County.

Extremely Low-Income Households

An extremely low-income household is defined as a household earning less than 30 percent of the AMI. According to HCD, the median income for a family of four in Solano County is \$82,600, which means that households making \$24,800 or less would be considered extremely low income. Since the 2010 Census data categorizes income level differently, the Census reports that 10 percent of the Unincorporated area and 15 percent of Solano County make less than \$24,999, slightly higher than HCD's extremely low-income category. Using this information, the number of extremely low-income households could be slightly lower than Census data provided. The Comprehensive Housing Affordability Strategy (CHAS) was developed by HUD to assist jurisdictions in writing their consolidated plans. Based on CHAS data there are 600 extremely low-income renter households and 310 extremely low-income owner households in unincorporated Solano County.

The County must provide an estimate of the projected extremely low-income housing needs. Per HCD guidelines, 50 percent of the Unincorporated area's very low-income households can be considered extremely low-income. Therefore, it can be estimated that approximately 50 percent of the very low-income regional housing need in the Unincorporated area has extremely low-income housing needs. In other words, of the 26 very low-income housing units needed, the Unincorporated area is estimating 13 units for extremely low-income households. Most, if not all, extremely low-income households will require rental housing.

Extremely low-income households will likely face housing problems such as overpaying, overcrowding, and/or accessibility issues as a result of their limited incomes. Also, many extremely low-income households will fall within a special needs category (disabled, seniors, large families, or female-headed households) and require supportive housing services.

Families and Individuals in Need of Emergency Shelter

Community Action Partnership of Solano (CAP Solano) is the designated Community Action Agency for the County and is a Joint Powers Authority between Solano County and the cities of Benicia, Dixon, Fairfield, Rio Vista, Suisun, Vacaville, and Vallejo.

CAP Solano completed a point-in-time count of homeless persons on the evening of January 27, 2011. The count identified a total of 683 persons in the county. The count did not identify any persons as residents of a specific city. In the previous Housing Element no persons were identified as residents of the unincorporated area of the County. The count identified that of the 683 persons classified as homeless, 172 utilized emergency shelter (25 percent), 276 lived in transitional housing (40 percent), and 235 were unsheltered (34 percent). Of those unsheltered, 49 were homeless families with at least one adult and one child, and 186 were individuals without children. Overall, 66 percent had access to shelters while 34 percent did not utilize or did not have access to shelters. In addition, the County provided data on homeless subpopulations. A total of 55 people identified themselves as severely mentally ill, 63 stated issues with substance abuse, 41 people were veterans and 14 were victims of domestic violence.

In addition to the 2011 CAP Solano Homeless County, the Department of Housing and Urban Development (HUD) HUD Homelessness Resource Exchange (HRE), and Continuum of Care Homeless Assistance Programs completed a point-in-time homeless population count in 2012. While this is not necessarily representative of the average homeless population, it is still one of the

best sources of available data. The HRE report identified 622 homeless persons of which 235 were unsheltered and 387 were sheltered. Subpopulation data highlights that of the 622 persons counted, 50 dealt with chronic homelessness, 28 were veterans, and 244 were persons in households with children. When compared to a 2010 HRE, the total number of homeless persons decreased 25 percent. A 44 percent decrease was observed with unsheltered homeless persons and a 46 percent decrease was observed in homeless households with children.

The most recent point-in-time count was conducted by CAP Solano in 2013. The 2013 point-in-time count reported that 1,227 homeless individuals were counted; 616 individuals were surveyed and 611 individuals were observed. It is unknown what percent of these individuals were sheltered or unsheltered. The count did not report any individuals in the unincorporated area of the county. The following counts in the jurisdictions add up to the 1,227 total individuals counted in the county:

- Benicia – 11
- Dixon – 31
- Fairfield – 300
- Vallejo – 642
- Vacaville – 230
- Rio Vista – 13

Calls were made to Mission Solano and Heather House shelters in Fairfield to inquire whether any of their residents are from the unincorporated County. Neither facility was able to provide that type of information.

Solano County has a 10-year plan addressing homelessness for the 2008 to 2018 time frame. According to HUD's most recent data (January 2013), Solano County has 223 beds year-round in emergency shelters, 306 beds year-round in transitional housing, and 131 beds year-round in permanent housing. Even with these 660 beds, Solano County is looking at the need to house over 3,000 homeless persons at any one time in Solano County. Solano County has 11 strategies addressing homelessness:

- Discharge planning and decrease the number of people being discharged into homelessness by 25 percent.
- Create new permanent housing beds for homeless and chronically homeless persons.
- Increase percentage of homeless persons staying in permanent housing over six months to 71 percent.
- Increase percentage of homeless persons moving from transitional housing into permanent housing by 61 percent.
- Increase percentage of homeless persons becoming employed by 11 percent.
- Ensure that the Continuum of Care has a functional Homeless Management Information System with 90 percent of the shelters and housing projects actively participating.

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- Improve access to mainstream resources by 25 percent.
- Chronically homeless individuals will be fully engaged in the continuum of services and housing available of them.
- Chronically homeless people will be forced to live on the street until permanent housing or affordable housing is available.
- Ensure sufficient outreach to homeless, at-risk families and non-chronically homeless individuals and provide for their basic needs.
- Further strengthen self-sufficiency supports for homeless people moving out of homelessness.

Additional homeless resources can be found in Table 47 of the Resources section of this appendix.

Military Workers

Travis Air Force Base (AFB) is located in the City of Fairfield, in the northeast part of the county. The base has a long and proud history of supporting humanitarian airlift operations at home and around the world. Today, the base includes approximately 7,260 active military personnel, 3,770 civilians, and 4,250 reservists. Although the base is located in the City of Fairfield, it is safe to assume that a number of military workers live within the Unincorporated area of the county.

Travis AFB has long been an important factor in employment in the county. Known as the "Gateway to the Pacific," Travis AFB handles more cargo and passenger traffic through its airport than any other military air terminal in the United States. Travis AFB has a major impact on the community as a number of military families and retirees have chosen to make Fairfield their permanent home. Travis AFB is one of the largest employers in Solano County as well, and the massive Travis workforce has a local economic impact of more than \$1 billion annually. The base also contributes a large number of highly skilled people to the local labor pool. David Grant Medical Center annually supports over 308,000 outpatient visits, 5,100 admissions, 40,500 dental visits, and 116 research protocols with 124 residents and 2,142 staff.

Because military personnel, by the nature of their employment, are mobile, and the income level of enlisted personnel is relatively low, they need rental housing that is affordable to low- and moderate-income households and that is available on a monthly basis (in contrast to a long-term lease). Military personnel with dependents need affordable family housing, with recreational amenities for children.

Housing Stock Characteristics

Housing Types

Table 22 shows the composition of the housing stock in 2000 and 2013 based on data from the DOF. In the Unincorporated area, single-family homes comprised 87 percent of the housing stock in 2013, up 3 percent from 2000. Multi-family units, including both apartments and condominiums, made up 3 percent of all housing in 2013, down 3 percent from 2000. With an annual growth rate of 1 percent, the Unincorporated area saw significant decrease in the amount of multi-family housing. From 2000 to 2013, the housing stock in the total county averaged 1 percent annual growth. Like the Unincorporated area of the county, the total

county comprised mainly single-family homes (72 percent), but saw no decrease in any housing types from 2000 to 2013.

Table 22
Housing Type, 2000–2013

Housing Unit Type	2000		2013		Annual Growth
	Number	Percentage	Number	Percentage	
Unincorporated area					
Single-Family Detached	5,859	84%	6,494	87%	1%
Single-Family Attached	220	3%	315	4%	3%
Multi-Family (2-4 Units)	293	4%	156	2%	-4%
Multi-Family (5+ Units)	119	2%	56	1%	-4%
Mobile Homes	470	7%	443	6%	0
Total	6,961	100%	7,464	100%	1%
Solano County					
Single-Family Detached	96,064	71%	110,413	72%	1%
Single-Family Attached	5,573	4%	6,596	4%	1
Multi-Family (2-4 Units)	10,247	8%	11,217	7%	1
Multi-Family (5+ Units)	19,776	15%	21,300	14%	1
Mobile Homes	4,587	3%	4,585	3%	0
Total	136,247	100%	154,111	100%	1%

Source: DOF, 2000 and 2013

Household Tenure

Housing tenure refers to the occupancy of a housing unit—whether the unit is owner-occupied or renter-occupied. Housing tenure is influenced by demographic factors (e.g., household composition, income, and age of the householder) as well as the cost of housing. As summarized in **Table 23**, households in the Unincorporated area and Solano County were all more likely to own their homes rather than to rent them in 2010. The Unincorporated area had a slightly higher percentage of owner-occupied households, 68 percent, while 63 percent of population in households in Solano County owned their homes in 2010.

Table 23
Household by Tenure, 2010

Household Type	Unincorporated area		Solano County	
	Number	Percentage	Number	Percentage
Owner Occupied	4,598	68%	89,648	63%
Renter Occupied	2,111	32%	52,100	37%
Occupied Housing Units	6,709	100%	141,748	100%

Source: 2010 US Census

Overcrowding

Data on housing overcrowding is available from the 2010 Census in the form of statistics regarding the number of persons per room in occupied housing units. **Table 24** compares the data for the Unincorporated area with data for all of Solano County. Overcrowding occurs when there is more than one occupant per room in a household, and severe overcrowding occurs when there are more than one and a half persons per room in a household (not including kitchen and bathrooms).

In 2010, approximately 98 percent of the Unincorporated area's housing units had 1.0 or fewer persons per room, meaning less than 2 percent would have been considered overcrowded. Of all units in the Unincorporated area, less than 1 percent had between 1.01 and 1.50 persons per room and almost no households had 1.51 or more persons per room.

When broken out according to tenure, zero renter-occupied households were overcrowded but 1 percent was severely overcrowded. Of the owner-occupied households, 1 percent was considered overcrowded and less than 1 percent was severely overcrowded.

Table 24
Overcrowding, 2010

Persons per Room	Owner		Renter		Total Overcrowded	
	Households	Percentage	Households	Percentage	Households	Percentage
1.00 or less	4,563	98%	2,101	99%	6,664	98%
1.01 to 1.50	25	1%	0	0%	25	1%
1.51 or more	10	1%	10	1%	20	1%
Total	4,598	100%	2,111	100%	6,709	100%

Source: 2006–2010 American Community Survey

Vacancy

According to the 2010 Census, the vacancy rate for the Unincorporated area was 6 percent in 2000 and 10 percent in 2010. Having an overall vacancy rate of 10 percent indicates that there are more housing units than residents. A vacancy rate measures the overall housing availability

in a community and is often a good indicator of how efficiently for-sale and rental housing units are meeting the current demand for housing. A vacancy rate of 5 percent for rental housing and 2 percent for ownership housing is generally considered healthy and suggests that there is a balance between the demand and supply of housing. A lower vacancy rate may indicate that households are having difficulty in finding housing that is affordable, leading to overcrowding or households having to pay more than they can afford. **Table 25** below highlights the change between 2000 and 2010 for the various vacancy types, highlighting the largest change being other vacant and seasonal use housing units, increasing 124 and 116 percent, respectively.

Table 25
Housing Units by Occupancy Status, 2000 and 2010

Unincorporated area	2000		2010		Percent Change 2000–2010
	Number	Percent	Number	Percent	
Total Housing Units	6,880	100%	7,445	100%	8%
Occupied Housing Units	6,471	94%	6,709	90%	4%
Vacant Housing Units	409	6%	736	10%	80%
For Rent	102	1%	142	2%	39%
For Sale Only	47	1%	78	1%	66%
Sold Or Rented, Not Occupied	34	<1%	44	1%	29%
For Seasonal, Recreational, or Occasional Use	69	1%	149	2%	116%
For Migrant Workers	30	<1%	38	<1%	<1%
All Other Vacant	127	2%	285	4%	124%
Total Vacancy Rate	6%		10%		4%

Source: 2010 US Census

Physical Condition of Housing Stock

Housing age is an important indicator of housing condition within a community. Housing is subject to gradual deterioration over time. As a general rule in the housing industry, structures older than 30 years begin to show signs of deterioration and require reinvestment to maintain their quality. Unless properly maintained, homes older than 50 years require major renovations to remain in good condition. If not properly and regularly maintained, housing can deteriorate and discourage reinvestment, thereby depressing neighboring property values and impacting the quality of life in a neighborhood. Maintaining and improving housing quality is an important goal for the County.

Table 26 displays the age of Solano County's occupied housing stock by year built as of 2013. Forty-three (43) percent of the county's housing stock was constructed before 1970. Between 1970 and 1989, 36 percent of the housing stock was constructed, and since 1990, 21 percent of the County's housing stock was built.

Table 26
Age of Housing – Unincorporated Solano County, 2010

Year Structure Built	Total Housing Built	Percentage of Total
Built 2010 to 2013	64	<1%
Built 2000 to 2009	518	7%
Built 1990 to 1999	950	13%
Built 1980 to 1989	1,129	15%
Built 1970 to 1979	1,574	21%
Built 1960 to 1969	913	12%
Built 1950 to 1959	709	9%
Built 1940 to 1949	673	9%
Built 1939 or earlier	934	13%
Total	7,464	100%

Source: 2010 Census, Solano County 2014

Housing Conditions Survey

Conversations with County staff have determined that the housing conditions as of July 2014 are still consistent with the housing survey performed in 2001 with the addition of a few demolitions recently completed in the Vallejo area. Approximately 47 percent of the County's housing stock is still in need of rehabilitation.

Mercy Housing performed a survey of housing unit conditions in the Unincorporated area during September and October of 2001. Per the direction of Solano County, Mercy Housing performed a housing conditions survey within six unincorporated communities considered to have higher housing rehabilitation needs than the Unincorporated area overall. These communities were Starr Subdivision, Elmira, Old Cordelia, Maple Street, Midway Road, and Rockville. In total, Mercy Housing inspected a sampling of 532 units within these communities, or approximately 8 percent of the Unincorporated area's total housing stock. Below is a summary of the results.

The data shown below summarize the overall housing rehabilitation needs of the six communities surveyed in the Unincorporated area. Based upon the sample survey within the specified communities, 47 percent of the communities' housing stock is in need of rehabilitation, of which 4 percent are dilapidated. Of units surveyed, 250 units were considered substandard, with the majority in need of moderate or minor rehabilitation. By extrapolating from the survey results, the six communities' total housing rehabilitation need is 346 units.

Table 27
Summary of Housing Conditions Survey Results

Condition	Number of Units	Percentage of Total
Minor	121	23%
Moderate	99	19%
Substandard	11	2%
Dilapidated	19	4%
Subtotal Substandard	250	47%
Subtotal Standard	282	53%
Total Units	532	100%

Table 28
Substandard Units by Area

Percentage of Total Units Surveyed in Area	Area	Substandard Units
Starr Subdivision	137	52%
Elmira	36	51%
Old Cordelia	18	54%
Rockville	27	30%
Maple Street	15	40%
Midway	17	53%
Total Substandard Units	250	47%

Starr Subdivision, Old Cordelia, and Midway have the largest proportion of units in substandard condition. Midway Road and Starr Subdivision also have the largest supply of dilapidated units, accounting for more than half of all dilapidated units surveyed in the Unincorporated area. Rockville and Maple Street have the lowest need for housing rehabilitation among the areas surveyed.

Assisted Housing Inventory and At-Risk Housing

California Housing Element law requires all jurisdictions to include a study of all low-income housing units which may at some future time be lost to the affordable inventory by the expiration of some type of affordability restrictions. The law requires that the analysis and study cover a five-year and a ten-year period, coinciding with updates of the Housing Element. Following are some of the programs that may be expiring:

- Prepayment of HUD mortgages: Section 221(d)(3), Section 236, Section 202, and Section 811, and Farmers Home (RHS) Section 515/516 subsidies to tenants and/or owners.
- Low-income use restrictions on Section 236(j)(1) projects are for the full 40-year mortgage term. However, owners have the option to repay the remaining mortgage at the end of the first 20 years.

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- FHA-insured mortgages under the Section 221(d)(4) program have no binding use restrictions. The affordability of these projects is governed by the Section 8 contracts maintained on the projects which are now approved on a year-to-year basis.
- Opt-outs and expirations of project-based Housing Choice contracts – The Housing Choice Voucher program is a federally funded program that provides for subsidies to the owner of a prequalified project for the difference between the tenant's ability to pay and the contract rent. Opt-outs occur when the owner of the project decides to opt out of the contract with HUD by prepaying the remainder of the mortgage. Usually, the likelihood of opt-outs increases as the market rents exceed the contract rents.
- Other – Expiration of the low-income use period of various financing sources, such as Low-Income Housing Tax Credit (LIHTC), bond financing, density bonuses, California Housing Finance Agency (CHFA), Community Development Block Grant (CDBG) and HOME funds, and redevelopment funds. Generally, bond financing properties expire according to a qualified project period or when the bonds mature. Density bonus units expire in either 10 or 30 years, depending on the level of incentives.

Inventory of At-Risk Rental Housing Units

According to the California Housing Partnership Corporation, there are no government-assisted rental properties in the Unincorporated area of Solano County and therefore there are no units that may be at risk of opting out of programs that keep them affordable to very low- and low-income households over the eight-year Housing Element Period (2015–2023).

Preservation Resources

Efforts by the County to retain low-income housing must be able to draw upon two basic types of preservation resources: organizational and financial. Qualified, nonprofit entities need to be made aware of the future possibilities of units becoming "at risk." Should a property become at risk, the County maintains an active list of resources by which to preserve that property. Below is a list of qualified entities in Solano County:

- ACLC, Inc.
- Affordable Housing Associates
- Affordable Housing Foundation
- Anka Behavioral Health
- C. Sandidge and Associates
- Christian Church Homes of Northern California, Inc.
- Community Home Builders and Associates
- Community Housing Opportunities Corporation
- Fairfield Planning Department
- Housing Corporation of America

- Mid-Peninsula Housing Coalition
- Nehemiah Progressive Housing Development Corp.
- Pacific Community Services, Inc.
- Resources for Community Development
- Sacramento Valley Organizing Community
- Senior Housing Foundation
- Solano Affordable Housing Foundation
- Vallejo Neighborhood Housing Services, Inc.

Housing Costs and Affordability

This section of the Housing Needs Assessment provides information on the current market conditions for housing in the Unincorporated area. This information is important, because it reveals the extent to which the private housing market is providing for the needs of various economic segments of the local population.

Affordable Housing Cost

Table 29 displays the maximum rents and sales prices, respectively, that are affordable to extremely low-, very low-, low-, moderate-, and above moderate-income households. Affordability is based on the following assumptions: a household spending 30 percent or less of their total household income for shelter; the maximum household income levels established by HUD and HCD; and maximum affordable sales prices based on 10 percent down, 30-year fixed rate mortgage at 7 percent. The maximum affordable prices are used to determine the affordability of market-rate rental and for-sale housing. For example, a three-person household with a monthly income of \$3,100 (\$37,200 annually) is considered a very low-income household. The maximum affordable monthly rent for a very low-income, three-person household is \$930 and the maximum affordable sales price is \$117,221.

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Table 29
Solano County Affordable Housing Cost, 2014

Income Group	1-Person	2-Person	3-Person	4-Person
Extremely Low				
Monthly Income	\$1,450	\$1,654	\$1,862	\$2,066
Monthly Rent	\$435	\$496	\$558	\$620
Max. Sales Price	\$49,535	\$57,093	\$66,436	\$74,804
Very Low				
Monthly Income	\$2,412	\$2,754	\$3,100	\$3,441
Monthly Rent	\$723	\$826	\$930	\$1,032
Max. Sales Price	\$88,998	\$103,027	\$117,221	\$131,209
Low				
Monthly Income	\$3,791	\$4,333	\$4,875	\$5,416
Monthly Rent	\$1,137	\$1,300	\$1,462	\$1,625
Max. Sales Price	\$145,567	\$167,800	\$185,440	\$212,227
Moderate				
Monthly Income	\$5,779	\$6,608	\$7,433	\$8,258
Monthly Rent	\$1,733	\$1,652	\$2,230	\$2,477
Max. Sales Price	\$227,118	\$261,125	\$294,967	\$328,810

Source: 2014 Income Limits, Department of Housing and Community Development.

Monthly mortgage calculation: http://www.credit.com/vcapps/calc_affordability.jsp

Note: Affordable housing cost for renter-occupied households assumes 30% of gross household income, not including utility cost. Affordable housing sales prices are based on the following assumed variables: 10% down payment, 30-year fixed rate mortgage at 5.25% annual interest rate. 30% of household gross income used to calculate affordable monthly mortgage payment.

Rental Rates and Trends

The survey results of rental listings in Solano County are displayed in **Table 30**. The survey reports the median listing prices for a variety of housing unit sizes in both single-family and multi-family housing types. A total of 30 housing units were surveyed. Most units surveyed were located in the outskirts of incorporated areas of the county as there were only a few available rental units in the Unincorporated area. The majority of rental units in the Unincorporated area were found in the Green Valley community outside Fairfield city limits.

During the time of the search, no one-bedroom units were available for rent in the Unincorporated area. Because the Unincorporated area is home to a large amount of single-family homes on larger parcels of land, finding smaller housing units or multi-family units was very challenging. Most units surveyed were single-family homes. Comparing the average rental rate of the below housing units in **Table 30** with the maximum affordable rental rates for the income groups in **Table 29**, the very low-, extremely low-, and in many cases low-income households will experience housing cost burdens and possible overcrowding.

Table 30
Solano County Rental Survey, 2014

Type	Number of Units Surveyed	Low	High	Average Price
Studio	4	\$850	\$1,000	\$925
2 bedrooms	3	\$1,200	\$1,750	\$1,475
3 bedrooms	13	\$1,350	\$2,475	\$1,760
4+ bedrooms	10	\$1,700	\$2,600	\$2,100

Source: Solano County Rental Search, July 2014

Home Sales Prices and Trends

Table 31 displays home sales data for the county as reported by Data Quick. The home sales attributes include the median sales price in 2012 and 2013 in addition to the percent change. The median sales price of homes in 2012 ranged from \$148,000 (Vallejo) to \$307,000 (Benicia). In 2013, the median sales prices ranged from \$186,000 (Vallejo) to \$413,000 (Benicia). Comparing this range with the maximum affordable purchase price of Solano County residents in **Table 29**, households considered low-, very low-, and extremely low-income would have difficulty purchasing a home that is affordable in most parts of the county. The median housing sales price of homes in the county saw an overall increase of 30 percent between 2012 and 2013, which the largest increase occurring in Benicia (34 percent). With the recent increase in housing sale prices following the recession, housing affordability is a current issue in Solano County.

Table 31
Solano County Annual Median Sales Price 2012–2013

Jurisdiction	2012 Median Price	2013 Median Price	Percentage Change 2012–2013
Benicia	\$307,500	\$413,000	34%
Dixon	\$210,000	\$275,000	20%
Fairfield	\$220,000	\$285,000	23%
Rio Vista	\$179,000	\$235,250	31%
Suisun City	\$170,000	\$225,000	32%
Vacaville	\$225,000	\$285,000	27%
Vallejo	\$148,250	\$186,000	25%
Solano County	\$193,000	\$251,000	30%

Source: Data Quick 2012–2013

Estimated Number of Households Overpaying for Housing by Income and Household Type

A household paying more than 30 percent of gross monthly income is considered to be burdened by housing cost and overpaying. According to the 2010 Census ACS and shown in **Table 32**, 1,105 (16 percent) of Unincorporated area households overpaid for housing. Of the households that overpaid for housing, 620 (56 percent) households were renter-occupied and 485 (44 percent) were owner-occupied. The share of households overpaying for housing the most were extremely-low income households (households earning less than 30 percent of the median income) paying more than 50 percent on housing costs. **Table 32** also compares overpayment of the Unincorporated area to Solano County as a whole. In 2010, Solano County saw a total of 59,999 households overpaying for housing. Of those, 26,605 owner-occupied households, 44 percent, were overpaying (at least 30 percent) and 33,394 renter occupied households overpaying, 56 percent. **Table 32** highlights that there is a higher rate of overpayment in both owner- and renter-occupied households in the county. Overall, Solano County saw higher combined levels of overpayment than the Unincorporated area.

Table 32
Households Overpaying for Housing, 2010

Tenure	Unincorporated		Solano County	
	Owner-Occupied	Renter-Occupied	Owner-Occupied	Renter-Occupied
Paying 30–50%				
Total Occupied Units Paying 30-50%	135	210	14,440	21,135
Extremely Low Income <30% of HAMFI	10	15	3,885	8,515
Very Low Income 31-50%	50	100	3,505	6,295
Low Income 50-80%	75	95	7,050	6,315
Paying 50%>				
Total Occupied Units Paying 50% or more	350	410	12,165	12,259
Extremely Low Income <30% of HAMFI	135	245	3,170	7,520
Very Low Income 31-50%	60	160	2,690	3,490
Low Income 50-80%	155	5	4,040	1,249
Total Households Overpaying at least 30%	485	620	26,605	33,394
Total Households	6,709		141,758	
Percent Overpayment of Total Households	7%	9%	19%	23%

Source: 2010 Census, 2010 ACS, HCD 2014

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According to CHAS data (**Table 33**), there were 75 owner households and 50 renter households earning less than 50 percent of the median family income (MFI) in the Unincorporated area in 2011 identified as having at least one of four housing problems (which include incomplete kitchen facilities, incomplete plumbing facilities, more than one person per room, and a cost burden greater than 30 percent). While there were fewer overall rental households with housing problems, 63 percent of those households were low income. Owner-occupied households had a much larger number of households with one or more problems, 830, but only 9 percent of those households were low income. It is important to note that, similar to ACS data, the CHAS dataset uses small samples and is subject to large margins of error and therefore may have totals and percentages that are slightly different than other data sources used in this document.

Table 33
Housing Problems for all Unincorporated area Households, 2011

	Total Renters	Total Owners	Total Households
Households with 1 or more housing problem	80	830	910
Household Income ≤30% MFI	20	20	40
Household Income >30% to ≤50% MFI	30	55	85
% Households (≤50% MFI) with any housing problems	63%	9%	14%

Source: 2011 CHAS

GOVERNMENTAL AND NON-GOVERNMENTAL CONSTRAINTS

Various interrelated factors can constrain the ability of the private and public sectors to provide adequate housing and meet the housing needs for all economic segments of the community. These factors can be divided into two categories: (1) governmental and (2) non-governmental constraints. Governmental constraints consist of land use controls, development standards, processing fees, development impact fees, code enforcement, site improvement costs, development permit and approval processing, and provision for a variety of housing. Non-governmental constraints consist of land availability, the environment, land cost, construction costs, and availability of financing.

Non-Governmental Constraints

The major factors within the private market system that contribute to the direct sale price or rental cost of new housing include land costs, site improvement costs, construction costs, financing costs, and sales costs.

Land Costs

Typically the cost to purchase land suitable for residential development contributes as much as half of the housing development cost. These costs are then passed along to future occupants of the completed structure, which is why it is important to analyze the effect land costs have on providing housing that is affordable. The cost of land in the Unincorporated area of the County was estimated using the listed prices of land on Loopnet for the County as a whole. Loopnet is a commercial real estate listing service that advertises a wide array of property types for sale.

In the Allendale community (north of Vacaville) of the county in July 2014, Loopnet listed a 32.5-acre property suitable for 6 single-family lots. The parcel is listed for \$2,000,000 or \$7.65 per square foot. Assuming that the property was developed with 6 single-family homes (1 unit/5.4 acre), the land would add \$333,333 to the cost of each home. A 0.16-acre multi-family infill lot in Vacaville is also listed on Loopnet. The lot would accommodate a duplex and is listed at \$55,500, which would add \$27,750 to the price of each unit. Loopnet also lists a 1.53-acre parcel in Vacaville designated High Density Residential which allows densities between 15–22 units per acre. If maximum density was approved, the site could potentially hold 33 units. The parcel is listed for \$295,000, meaning the cost of land would add \$9,000 to the final cost of each unit. According to local developers and real estate agents, the cost of land located closer to Benicia and Vallejo tends to be much higher. Trulia provides a listing for a vacant 0.21-acre single-family parcel in Benicia for \$235,000, which is \$25.70 per square foot and significantly higher than land in the Vacaville and Dixon area. The Benicia parcel is suitable for one single-family home, which means that the cost of land adds \$235,000 to the final cost of the home.

Construction Costs

Construction costs are those incurred in actually constructing a dwelling unit. As with other land development costs, construction costs vary. Important determinants of construction costs include the amenities built into the unit, materials used, the prevailing labor rate, and the difficulty of building on the site. According to Building-cost.net, a housing construction cost resource that calculates the total estimated cost of building a new home (land costs not included), single-family home construction costs in 2014 were estimated at approximately \$140 per square foot for average quality construction. The estimated total construction cost of a 1,500-square-foot home with four exterior walls, an attached garage, central heating and air, and average building materials was \$212,002.

Estimating the cost to develop multi-family housing in the county is more difficult to determine, due to the lack of multi-family development activity in the Unincorporated area of the county. However, in the incorporated portions of the county there are a number of multi-family developments that can assist in providing an estimate of the cost to develop multi-family housing in the county. In 2014, the Heritage Commons (60 units) senior living affordable housing project was completed in Dixon. According to the developers of Heritage Commons, the cost to construct the project was roughly \$14,300,000 (including \$600,000 for land), or \$219,267 per unit.

Financing

The cost of borrowing money to finance the construction of housing or to purchase a house affects the amount of affordably priced housing in Solano County. Fluctuating interest rates can eliminate many potential homebuyers from the housing market or render a housing project that could have been developed at lower interest rates infeasible. When interest rates decline, sales increase. The reverse is true when interest rates increase. Over the past decade, there was dramatic growth in alternative mortgage products, including graduated mortgages and variable rate mortgages. These types of loans allow homeowners to take advantage of lower initial interest rates and to qualify for larger home loans. However, variable rate mortgages are not ideal for low- and moderate-income households that live on tight budgets. In addition, the availability of variable rate mortgages has declined in the last few years due to greater regulation of housing lending markets. Variable rate mortgages may allow lower-income households to enter into homeownership, but there is a definite risk of monthly housing costs rising above the financial means of that household. Therefore, the fixed interest rate mortgage remains the preferred type of loan, especially during periods of low, stable interest rates. **Table 34** illustrates interest rates as of July 2014. The table presents both the interest rate and annual percentage rate (APR) for different types of home loans. The interest rate is the percentage of an amount of money which is paid for its use for a specified time, and the APR is the yearly percentage rate that expresses the total finance charge on a loan over its entire term. The APR includes the interest rate, fees, points, and mortgage insurance and is therefore a more complete measure of a loan's cost than the interest rate alone. However, the loan's interest rate, not its APR, is used to calculate the monthly principal and interest payment

Table 34
Conforming Loan Interest Rates, 2014

Term	Interest	APR
30-year fixed	4.250%	4.335%
15-year fixed	3.500%	3.647%
5-year adjustable rate	3.250%	3.968%

Source: www.wellsfargo.com, July 2014

Notes: Conforming loan is for no more than \$417,000. A jumbo loan is greater than \$417,000.

Overall Housing Development Costs

Based on the factors discussed above, and including land costs, impact fees, hard costs, soft costs, and developer profit, it is estimated that the cost to produce a single-family detached home of approximately 1,500 square feet on a relatively small lot (eight to ten dwelling units per acre) is at least \$390,000. For multi-family units developed at eight dwelling units per acre, the estimated production cost is \$200,000 to \$230,000 per unit.

Environmental Constraints

Flooding

According to the County's 2008 Safety Element of the General Plan, a large portion of developed and undeveloped county lands are subject to flooding as a result of heavy seasonal rainfall, dam inundation, and canal or levee failure. A majority of these county flood-prone lands are specifically subject to inundation as a result of heavy rainfall and resulting stream overflows.

Heavy seasonal rainfall, occurring between November and May, often results in stream overflows. A number of streams in the county have long histories of seasonal flooding, often resulting in significant damage. Flood risk is intensified in the lower stream reaches by the likelihood of coincident high tides and strong offshore winds during heavy rainfall. Spreading urbanization is further aggravating the potential for stormwater flood damage in the county by reducing floodplain area available to absorb stormwater in low-lying areas and preventing natural absorption of stormwater in the higher land, upstream watersheds. Thus, unchecked urbanization is leading to increased rates and volumes of stormwater runoff in the county. Because of the varying conditions of watersheds in the county, each one should be individually addressed using a coordinated set of County policies that control watershed runoff and stream overflow to reduce flooding.

Agricultural land has long been used for valuable de facto flood protection. Farmers have historically allowed stormwater detention on their properties during storm events and have expressed a desire that the County recognize the positive contributions of farmland as a flood prevention and reduction measure. Agricultural parcels with higher likelihood of flooding have been identified and removed from the land inventory list.

Faults

According to the 2008 Safety Element, the County is crossed by a number of active faults, where past movement in the earth's surface has caused rock fractures. Locations of active faults in Solano County which are most likely to experience significant damage from earthquake-related ground shaking are located in areas west of Fairfield. Coastal regions are threatened by tsunamis, which are powerful wave surges that can be caused by earthquakes and have the potential to flood lowland areas. By the time a tsunami wave reaches the Carquinez Strait, much of its energy would have already dissipated. The only areas of the county that would be subject to inundation by tsunamis are the southwestern part of Mare Island and Island No. 1 located southwest of SR 37.

Non-seismic geologic hazards also exist within the county. Shrink-swell soils contain large amounts of clay that swell when wet and shrink when dry. These clays will swell despite heavy loads of large structures placed on them. Repetition of this shrink-swell cycle can cause building damage, including cracked foundations. In most cases removing the top layer of soil and/or preconstruction design and engineering are enough to prevent the costly problems associated with these soils. Land settlement is a gradual lowering of the ground surface caused by compression of fine-textured deposits like clays and silts. Many of the fine-textured bay mud deposits that exist in and around the Napa River Delta are susceptible to settlement and present a potential hazard for road construction and development in southern Solano County.

Infrastructure Availability

A scarcity of community water and sewer facilities in the Unincorporated area is a constraint on the production of any significant quantities of new housing, especially housing constructed at densities that could be affordable to lower- and moderate-income households.

Sewer

According to the 2008 Public Facilities and Services Element in the County's General Plan, some parcels in the Unincorporated area near cities are served by sewer and wastewater services from adjacent cities and sewer districts. The City of Vacaville serves the unincorporated community of Elmira, which is adjacent to the service area for the Vacaville sewer system. The Suisun-Fairfield Sewer District provides sewer service to the unincorporated community of Cordelia and parts of Suisun Valley from Rockville Road south to the Fairfield city limits. The Vallejo Sanitation and Flood Control District provides sewer service to the Vallejo unincorporated islands. The City of Dixon provides service to a few parcels directly outside of Dixon. A few of the larger developments in the unincorporated county have small treatment systems. The Twin Creeks Condominium Project in Green Valley and the recreational vehicle parks within the county have small treatment systems that serve multiple ownerships and users.

The majority of developments in the unincorporated county, those not served by municipal sewer or small-scale treatment systems, operate stand-alone septic tanks. Water treatment using a septic system depends on gravity to move sewage effluent through the soil, where the effluent is treated by the biological activity in the soil. Some properties also employ either an aerobic treatment unit or a sand filter, or both, to assist in treatment. A permit is required in Solano County to install, repair, or modify a septic system. Under this permitting system, records are kept for all septic tanks in the county. Problems with septic systems have been reported when heavy rains saturate the soil and the systems' leaching mechanisms do not operate at full capacity, potentially releasing raw sewage. Untreated sewage on the ground can lead to increased human exposure, adverse health effects, and groundwater pollution.

Appendix A: Housing Needs Assessment

Water

Solano County has a number of water providers, districts, and sources. Solano County Water Agency delivers untreated water from the Solano Project (a project that includes Monticello Dam and Lake Berryessa) and the North Bay Aqueduct (a State Water Project facility). The Solano County Water Agency provides water for municipal, industrial, and agricultural uses in incorporated cities, UC Davis, the Solano Irrigation District, and Maine Prairie Water District service areas. Agricultural users in the Solano Irrigation District service area, such as Elmira, Gibson Canyon, Quail Canyon, Blue Ridge Oaks, Pleasant Hills Ranch and Vaca Valley area, use surface water and groundwater; those in the Maine Prairie Water District service area and Reclamation District 2068 use surface water only. Other water sources in the Unincorporated area are the Rural North Vacaville Water District, the City of Vallejo, Suisun-Solano Water Authority, and private and community wells. Additionally, some wastewater from the Fairfield/Suisun area is recycled and used for agricultural purposes. New requirements currently limit Solano Irrigation District's ability to provide additional water service connections with on-site treatment systems until new water quality standards are met. City and Local Agency Formation Commission (LAFCO) servicing policies today limit the extension of sewer and water service beyond current city boundaries. This limits the County's ability to provide additional water and sewer service to the Unincorporated area.

Although water is an issue in the county, it has not been a constraint in meeting the County's 2007–2014 regional housing need of 99 units. Since 2007, the County has constructed 116 units, exceeding its total regional housing need requirement.

To comply with Senate Bill 1087, the City will immediately forward its adopted Housing Element to its water and wastewater providers so they can grant priority for service allocations to proposed developments that include units affordable to lower-income households.

Governmental Constraints

While local governments have little influence on market factors such as interest rates, their policies and regulations can affect the type, amount, and affordability of residential development. Since governmental actions can constrain development and affordability of housing, state law requires that the Housing Element "address and, where appropriate and legally possible, remove governmental constraints to the maintenance, improvement, and development of housing" (Government Code Section 65583(c) (3)).

Governmental constraints include local land use controls, on- and off-site development standards, building and housing codes, permit processing times, permit processing fees, residential development fees, and delays in permit processing that can cause increases in financing cost.

Land Use Controls

The County's land use controls offer limited options for new construction of low- and moderate-income housing. The County's land use policies are firmly based upon the goal of urban development occurring in urban areas, principally within the seven cities in the county. The County regulates land use through General Plan Land Use Designations, which are implemented through zoning districts. This section identifies the General Plan Land Use Designations, their associated zoning districts, and the development standards that accompany each zoning district.

General Plan Land Uses Designations

The County has five residential land use categories that provide for a wide range of densities. The purpose is to ensure that residential land is developed to a density suitable to its location and physical characteristics.

The County adopted its General Plan in 2008. The General Plan contains 9 land use designations that allow residential uses and are currently on the zoning map. **Table 35** identifies and describes the current Land Use Designations.

Table 35
Solano County General Plan Residential Land Use Descriptions

Zoning Code District	General Plan Land Use Designation	Maximum Density in General Plan	Land Use Description
RR-2.5 RR-5 RR-10	Rural Residential	1 du/2.5 acres to 1 du/10 acres depending on zone	This designation is applied to areas appropriate for rural, low density, single-family homes, where agriculture is not the sole land use and commercial agricultural production capability is low, where self-sufficiency and privacy are desirable and only minimal essential public services and facilities are available.
R-TC-1AC, R-TC-20, R-TC-15, R-TC-10, R-TC-6, R-TC-5, R-TC-4	Traditional Community Residential	1-4 du/acre	This designation recognize current residential and mixed-use communities located outside agricultural or municipal service areas where previous development has occurred at higher densities or intensities than currently allowed under County policy.
R-TC-MU, R-TC-MF	Traditional Community Mixed Use	1-4 du/acre [0.25 FAR]	This designation is intended for certain medium-density residential and retail commercial and business areas that are appropriate for residential and commercial uses, and that can be served by community services.
No zoning code districts	Urban Residential	2-25 du/acre	This designation provides for urban densities of residential development in municipal service areas. These areas are intended to be annexed and developed by cities with the necessary services and facilities to support development at urban densities.
A-20, A-40, A-60, A-80, A-160, A-SV-20	Agriculture	Determined by agricultural location as described in Agriculture Element. Starting at 1 du/20 acres up to 1 du/160 acres	This designation is intended for 20-, 40-, 80-, and 160-acre minimums. A-40 and A-80 zoning has been applied to agriculture areas with high quality soils that has been brought into intensive agriculture production through irrigation. These properties are generally retained in parcel sizes of 40 to 80 acres and are identified as prime farmland by the California Department of Conservation based on soil type. Agricultural land with lower-quality soils is used for dry land farming range land and is generally retained in parcel sizes of 20 and 160 acres. A-SV-20 is specifically zoned for Suisun Valley agriculture.

Appendix A: Housing Needs Assessment

Zoning Code District	General Plan Land Use Designation	Maximum Density in General Plan	Land Use Description
M-L, M-G	Manufacturing	1 du/.5-3 acres	This designation provides an environment conducive to the development and protection of modern, large-scale administrative facilities, research institutions, warehousing, and specialized or light manufacturing organizations, all of a non-nuisance type, in accordance with the concept of an industrial park.
C-R, C-R-L	Commercial	.03 FAR	This designation is intended to provide appropriate commercial recreation uses that support recreational activities and resource-based recreational uses in the county in a manner compatible with surrounding land uses. The C-R zoning district is consistent with the commercial recreation designations of the General Plan outside the Suisun Marsh management area.
W	Watershed	1 du/106 acres	This designation aims to create watershed and conservation district areas of Solano County. In order to protect these areas from the constant threat of wildfire, subsidence, and landslide, leading to the destruction and financial loss to private and public property; prevent increased threats of these hazards through overdevelopment of these areas; and to protect the general welfare of the County as a whole, there is hereby created a zone classification within which the establishment, perpetuation, and protection of watershed and conservation district shall be encouraged.
M	Marsh Preservation	1 du/250 acres	This designation helps preserve and enhance the quality and diversity of marsh habitats, within which marsh-oriented uses shall be encouraged to the exclusion of such other uses of land as may be in conflict with the long-term preservation and protection of marsh areas. The provisions of this section shall be strictly interpreted to provide maximum protection to marsh areas.

Source: Solano County Zoning Code 2014

Zoning Regulations

The provisions of the Solano County Zoning Ordinance implement the policies and standards set forth in the General Plan. The Zoning Ordinance establishes the types of allowed residential uses as well as residential development standards for each zoning district. Development standards are intended to protect the safety and welfare of the County's residents and preserve community character.

A p p e n d i x A : H o u s i n g N e e d s A s s e s s m e n t

Most of the land in the Unincorporated area is designated for agriculture. Where land is designated for residential use in the Unincorporated area, the County's Zoning Ordinance contains several provisions appropriate for development standards. While residential units are allowed in other zoning districts, the principal zoning districts that allow for residential development are Agricultural, Rural Residential, Residential-Traditional Community, and Residential-Traditional Community Mixed Use. Additional zones that allow residential uses include commercial recreation, manufacturing limited and manufacturing general. The watershed (W) and Marsh Protection (MP) zones also allow residential dwellings on large parcels of land over 160 acres and 250 acres, respectively. **Table 36** below provides a summary of the residential development standards as set forth in the County's Zoning Regulations. The residential development standards are created to ensure that the overall health, safety, and welfare of the community are protected while ensuring that the vision, goals, and policies of the General Plan are achieved.

A p p e n d i x A : H o u s i n g N e e d s A s s e s s m e n t

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Table 36
Residential Development Standards

District	Residential Traditional Community										Rural Residential			Agriculture		Commercial	Manufacturing			Watershed	Marsh Preservation	
	One-Family Residence			Duplex Residence		Multiple Residence	Mixed Use	Residential Estate														
	R-TC-5	R-TC-6	R-TC-4	R-TC-D4	R-TC-D-6	R-TC-MF	R-TC-MU	R-TC-10	R-TC-15	R-TC-20	R-TC-1AC	R-R 2½	R-R 5	R-R 10	A-20 thru A-160	A-SV-20	C-R and C-R-L	M-L	M-G 1/2	M-G 3	W	M
Minimum Lot Area	5,000 s.f.	6,000 s.f.	4,000 s.f.	4,000 s.f.	6,000 s.f.	5,000 s.f.	4,000 s.f.	10,000 s.f.	15,000 s.f.	20,000 s.f.	1 acre	2.5 acres	5 acres	10 acres	20 – 160 acres	20 acres	None	1 acre	.5 acre	3 acres	160 acres	250 acres
Primary Dwelling Size	1,000 square feet minimum																					
Front Setback	0	20 feet	20 feet	20 feet	20 feet	30 feet	0	20 feet			30 feet			30 feet			20 feet	30 feet	10 feet		30 feet	10 feet
Side Setback	5 feet	10 feet	5 feet	5 feet	5 feet	10 feet	5 feet	10 feet			10 feet			20 feet			0	10 feet	20 feet			10 feet
Rear Setback	0	15 feet	10 feet	10 feet	10 feet	15 feet	0	25 feet			25 feet			25 feet	10 feet	10 feet between structures	20 feet				10 feet	
Maximum Height	35 feet				50 feet	35 feet										50 feet			35 feet			
Maximum Density	8.7 du/acre	7.3 du/acre	10.9 du/acre	21.8 du/acre	7.3 du/acre	4 du/acre	4 du/acre	4.3 du/acre	2.9 du/acre	2.1 du/acre	1 du/acre	1 du/2.5 acres	1 du/5 acres	1 du/10 acres	1 du / 20-160 acres	1 du/20 acres	0.3 FAR	1 du/acre	1 du/.5 acre	1 du/3 acres	1 du/160 acres	1 du/250 acres
Parking	For requirements, see note below																					

Source: Solano County Zoning Code 2014

Note:

Residential uses: Two spaces per each primary dwelling unit and one space for each secondary dwelling, or secondary living unit. Spaces should be located behind the front yard setback line in the R-TC and R-TC-MU districts. One enclosed space plus one unenclosed space per dwelling unit in a duplex in the R-TC-D or R-TC-MF district.

Mobilehome park: One and one-half spaces per mobilehome space, plus one additional space per four mobilehome spaces.

Boarding houses and rooming houses: One space per each guest.

Appendix A: Housing Needs Assessment

How Residential Uses are Allowed

The Housing Element must identify adequate sites that are available to encourage the development of various housing types for all economic segments of the population through appropriate zoning and development standards. Some of the housing types include single-family residential housing, multiple-family residential housing, residential accessory dwelling units, mobile homes, duplexes, transitional housing, supportive housing, second units, single-room occupancy units, and emergency shelters. **Table 37** below shows the housing types that are permitted by Zoning District.

Table 37
Housing Types Permitted by Zoning District

	R-TC-6	R-TC-5	R-TC-4	R-TC-D4	R-TC-D6	R-TC-MF	R-TC-MU	R-TC-10	R-TC-15	R-TC-20	R-TC-1AC	R-R 2½	R-R 5	R-R 10	A-20 to A-160	A-SV-20	C-R	C-R-L	M-L	M-G	W	MP
Single-Family Dwelling	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Manufactured Homes	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Multiple Family Dwelling	--	--	--	--	--	A	A	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Duplex	A	--	A	A	--	A	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dwelling Group	--	--	--	--	--	A	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Secondary Dwelling	A	A	A	--	--	--	--	A	A	A	A	A	A	A	A	--	--	--	--	--	--	--
Guest House	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rooming and Boarding House	--	--	--	--	--	A	--	--	--	--	--	A	A	A	--	--	--	--	--	--	--	--
Storage, Mobile Home	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	A	--	--	--	--	--	--
Nursing Home, Rest Home	--	MUP	--	MUP	MUP	MUP	MUP	MUP	--	--	--	--	--	--	--							
Community Care Facility ²	UP	UP	--	UP	UP	UP	UP	UP	--	--	--	--	--	--	--							
Agricultural Employee Housing	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AP	AP	--	--	--	--	--	--
HCD Agricultural Employee Housing	--	--	--	--	--	--	--	--	--	--	--	--	--	--	A	AP	--	--	--	--	--	--
Single-Room Occupancy ¹	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Transitional Housing	UP	UP	--	UP	UP	UP	UP	UP	--	--	--	--	--	--	--							
Supportive Housing	UP	UP	--	UP	UP	UP	UP	UP	--	--	--	--	--	--	--							
Emergency Shelter	UP	UP	--	UP	UP	UP	UP	UP	--	--	--	--	--	--	--							

Source: Solano County Zoning Code 2014

A- Allowed use; MUP- Minor Use Permit; UP- Use permit required; -- Prohibited

1. Program D.4 states the County will amend the Zoning Code to add the definition of a single-room occupancy unit (SRO) to the current rooming or boarding house definition.

2. Transitional housing, supportive housing, and emergency shelters fall under the community care facility definition. These uses are considered residential and therefore permitted, if there are six or fewer persons.

Parking

The County's parking requirements for residential zones vary by housing type. Two parking spaces are required for each primary dwelling unit, and one parking space is required for each secondary dwelling, or secondary dwelling unit; the spaces in the R-TC zones should be located behind the front yard setback line. For boarding houses and rooming houses, one parking spot is required per guest. The parking spaces shall also comply with the development and architectural standards in Section 28-25 of the Zoning Ordinance. One exception to the parking requirements is in the R-TC-D zoning district which allows for one enclosed parking space and one unenclosed parking space per dwelling unit. For mobile home parks, one and one-half parking spaces are required per mobile home space and there must also be one additional parking space per four mobile home spaces.

Solano County Orderly Growth Initiative

Measure A was a voter initiative that was passed by the voters in 1984 and was reintroduced by a citizens committee in 1994 as the Orderly Growth Initiative. In 1994, the Orderly Growth Initiative was adopted by the Board of Supervisors and codified into the General Plan. The 2008 General Plan extended the Orderly Growth Initiative to 2028 through the passage of Measure T, approved by voters in November 2008. The General Plan restricts the conversion of land¹ designated Agriculture or Open Space in the County's land use plan to higher-density residential uses. The General Plan allows up to 50 acres of agriculturally zoned land to be converted for residentially zoned uses if the following criteria are met:

- a. The land is immediately adjacent to comparably developed areas that have available services with sufficient capacity to provide services to the proposed converted site.
- b. The annexation of the site is not appropriate or possible.
- c. All residential units constructed at the site will be affordable to very low-income and low-income households per the Housing Element.
- d. There is no existing residentially designated land available for low- and very low-income housing.
- e. The redesignations of land and the construction of very low- and low-income housing are required to comply with state law requirements for provisions of such housing.

Agricultural lands can also be redesignated to rural residential uses at densities of one unit per 2.5 or 5 acres if the following criteria are met:

- a. The higher density will not constitute or encourage piecemeal development.
- b. The land is not defined as prime agricultural land.
- c. The land is not suitable for agricultural use due to poor soil, drainage, or terrain.
- d. The conversion will not interfere with nearby agricultural uses.

¹ Agricultural lands include Intensive Agriculture and Extensive Agriculture land use designations. Open Space lands include Park and Recreation, Watershed, and Marsh land use designations.

Appendix A: Housing Needs Assessment

While the General Plan does allow for the conversion of agricultural land, no land has been converted in the past 20 years. Any conversion of agriculturally zoned land to higher-density residential requires a ballot process with a countywide election. In summary, while the Orderly Growth Initiative intends to limit sprawl and prevent the conversion of open space and agricultural land, the initiative also inhibits the ability to build housing at urban densities in the Unincorporated area. Although Measure T is a constraint to development of housing, the County has an excess amount of vacant land zoned RS and RR that is suitable for the development of housing.

Provisions for a Variety of Housing

The Housing Element must identify adequate sites that are available to encourage the development of various housing types for all economic segments of the population through appropriate zoning and development standards. Housing types include single-family and multi-family dwellings, secondary dwelling units, agricultural employee housing, rooming and boarding houses, and mobile and manufactured homes. **Table 37** (above) shows the housing types that are permitted by zoning district.

Transitional and Supportive Housing

Transitional housing is defined in Government Code Section 65582(h) as buildings configured as rental housing developments, but operated under program requirements that require the termination of assistance and recirculating of the assisted unit to another eligible program recipient at a predetermined future point in time that shall be no less than six months from the beginning of the assistance.

Supportive housing is defined by Government Code Section 65582(f) as housing with no limit on length of stay, that is occupied by the target population, and that is linked to an on-site or off-site service that assists the supportive housing resident in retaining the housing, improving his or her health status, and maximizing his or her ability to live and, when possible, work in the community.

Target population is defined in Government Code Section 65582(g) as persons with low incomes who have one or more disabilities, including mental illness, HIV or AIDS, substance abuse, or other chronic health condition, or individuals eligible for services provided pursuant to the Lanterman Developmental Disabilities Services Act (Division 4.5 (commencing with Section 4500) of the Welfare and Institutions Code) and may include, among other populations, adults, emancipated minors, families with children, elderly persons, young adults aging out of the foster care system, individuals exiting from institutional settings, veterans, and homeless people.

SB 2 (Cedillo, 2007) requires that transitional and supportive housing types be treated as residential uses and subject only to those restrictions that apply to other residential uses of the same type in the same zone. Both transitional and supportive housing types must be explicitly permitted in the Zoning Code. Currently, transitional and supportive housing types fall under the community care facility definition and are therefore permitted by right in all residential zones with six or fewer people. To comply with SB 2, the County is currently preparing Zoning Code amendments to add definitions of both transitional and supportive housing as defined by the state and amend the Zoning Code to allow both transitional and supportive housing types as a permitted use subject to only the same restrictions on residential uses contained in the same type of structure. The amendments will be adopted prior to or at the same time as the adoption of the Housing Element.

Emergency Shelters

SB 2 requires the County to allow emergency shelters without any discretionary action in at least one zone that is appropriate for permanent emergency shelters (i.e., with commercial uses compatible with residential or light industrial zones in transition), regardless of its demonstrated need. The goal of SB 2 was to ensure that local governments are sharing the responsibility of providing opportunities for the development of emergency shelters. To that end, the legislation also requires that the County demonstrate site capacity in the zone identified to be appropriate for the development of emergency shelters. Within the identified zone, only objective development and management standards may be applied, given they are designed to encourage and facilitate the development of or conversion to an emergency shelter.

Those standards may include:

- The maximum number of beds or persons permitted to be served nightly by the facility.
- Off-street parking based upon demonstrated need, provided that the standards do not require more parking for emergency shelters than for other residential or commercial uses within the same zone.
- The size and location of exterior and interior on-site waiting and client intake areas.
- The provision of on-site management.
- The proximity to other emergency shelters provided that emergency shelters are not required to be more than 30 feet apart.
- The length of stay.
- Lighting.
- Security during hours that the emergency shelter is in operation.

The County's Zoning Regulations identify emergency shelters as a residential care facility use type as part of the definition of a community care facility. The County allows the development of community care facilities in all residential zones with a use permit. However, the zoning regulations recognize residential care facilities with six or fewer persons as residential uses of property and therefore allow the development of a residential care facility with six or fewer persons as a permitted use subject to the same development standards as all other residential use types. The County is currently preparing amendments to County's Zoning Regulations to identify emergency shelters as a residential care facility use type as part of the definition of a community care facility. The draft amendments propose to allow emergency shelters by right in the CS, R-TC-MU, and R-TC-MF zoning districts. The amendments will be adopted prior to or at the same time as the adoption of the Housing Element.

In addition to permitting emergency shelters for groups of six or less in all residential zones, the County has assisted in the development of a one-stop residential services center in the City of Fairfield. The residential services center, Bridge to Life Center, was recently developed and will be managed by Mission Solano.

The Solano County Continuum of Care identified a total of 660 beds in Solano County in 2014. CAP Solano completed a count of homeless persons on the evening of January 27, 2011. The count identified a total of 683 persons in the county. The count did not identify any persons as residents of the Unincorporated area of the county.

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The County's contribution toward assisting with the development of the Bridge to Life Center as well as current zoning regulations which permit emergency shelters as community care facilities mitigate potential constraints toward the development of emergency shelters. As stated in Program D.2 the County will continue to cooperate and work with other governmental and non-governmental organizations to encourage, promote, and facilitate the provision of emergency shelters, transitional housing, and housing to meet other special housing needs.

Through the collaborative efforts of the Continuum of Care, the County will continue to assess the magnitude of the homeless problem and to coordinate and promote housing assistance programs for the homeless. The County will promote the use of community facilities and continue to work with service agencies to provide short-term emergency housing for the homeless (rotating church space, hotel/motel vouchers, armories, public spaces, emergency shelters for natural disasters, special need shelters such as battered women's shelters, sober housing, etc.). The County will continue to encourage and work with and assist nonprofit housing development corporations to promote, assist, or sponsor housing for the homeless. The County will also explore the feasibility of using its CDBG funds to provide seed money to assist nonprofit agencies in these efforts. Through its Zoning Code, the County will continue to provide opportunities for sites to accommodate emergency shelters and transitional housing in all of its residential zoning districts through the use permit process and to accommodate farmworker housing in the Agricultural zoning districts.

Bridge to Life Center

The Bridge to Life Center, completed in phases since 2009, has access to public transportation and is near the Solano County Office of Health and Human Services, for the convenience of its clients to obtain County social services such as enrollment in welfare and food stamps programs and access to County health care programs. This type of housing project was the largest of its kind in Solano, and includes a women's and children's center with space for 63 residents, a main dining hall, a day care center for 20 children, an education center with classrooms, housing for 40 veteran men, a mobile food kitchen, and housing for 12 families. This project was a partnership between Mission Solano, Homeaid of Northern California (the charitable arm of the Home Builders Association), the City of Fairfield, and Solano County. During a 2013 point-in-time survey, 63 individuals resided at the Bridge to Life Center. Of those surveyed, 29 were female and 34 were male (33 of which were veterans). The range of age for these individuals was 25-55.

Community Care Facilities

The County permits residential care facilities, including an intermediate care facility for the developmentally disabled, a congregate living health facility, a transitional housing facility, or an emergency shelter facility but excluding a facility for wards of the juvenile court, which serves six or fewer persons, subject to a use permit. Group homes of six persons or fewer have the same parking requirements as conventional single-family units. The Zoning Code permits community care facilities for seven or more people in residential zoning districts (R-R, R-TC [except R-TC-4], and R-TC-MF), subject to a conditional use permit as well. Conditional use permits require a public hearing with public notice. As part of this process, the Planning Commission establishes parking requirements after determining actual parking need; thus, projects that would generate minimal parking demand would not be held to "standard" parking requirements that might represent an unnecessary constraint.

Community care facilities are defined as "Any facility, place or building, including any family home, group home, social rehabilitation facility or similar facility but excepting any such facility owned and operated by the County, which is maintained and operated to provide residential care, day care, or homefinding agency services for children, adults, or children and adults, including, but not limited to, the physically impaired or handicapped, mentally impaired,

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incompetent persons, and abused or neglected children. A community care facility may provide incidental medical services.

'Residential care' means nonmedical care provided on a 24-hour basis to persons in need of personal services, guidance, counseling, supervision, recovery services, supportive services, or assistance essential for sustaining the activities of daily living or for the protection of the individual.

'Day care' means nonmedical care provided on a less than 24-hour basis to persons in need of personal services, supervision, counseling, or assistance essential for sustaining the activities of daily living or for the protection of the individual.

'Homefinding agency' means any individual or organization engaged in finding homes or other places for placement of persons of any age for temporary or permanent care or adoption.

A residential care facility, including an intermediate care facility/developmentally disabled, a congregate living health facility, a transitional housing facility, or an emergency shelter facility but excluding a facility for wards of the juvenile court, which serves six or fewer persons, exclusive of the licensee, members of the licensee's family, and persons employed as facility staff, shall be considered a residential use of property rather than a community care facility and the residents and operators of the facility shall be considered a family for purposes of this Chapter. A small family day care home or a large family day care home, as defined in state law, or a day care facility which serves six or fewer persons, exclusive of the licensee, members of the licensee's family, and persons employed as facility staff, shall be considered a residential use of property rather than a community care facility."

Through the conditional use permit process, the County is able to ensure that a proposed location is best suited for larger group homes of seven persons or greater and that no residential neighborhood is overly impacted with community care facilities. The requirements for a conditional use permit for community care facilities do not act as a constraint on provision of larger group housing for persons with disabilities. The County has not had to deny permission to any proposed community care facility because they could not locate a suitable site that complied with the requirements stated above. However, the County will continue to review the provisions for community care facilities, including facilities for persons with disabilities, as part of the County Zoning Code update.

Use permit applications are evaluated against a standard to ensure that there is not an over concentration of such facilities in any one area of the county. A community care facility proposed on a parcel may not be less than 400 feet from another parcel containing a community care facility. The average parcel within the Rural Residential (RR) zoning district is between 163 feet (RR-2.5) and 223 feet (RR-5) in width where 80 percent of the available sites are located. Given the average parcel widths, this requirement does not unduly restrict the siting of these facilities. In the large Traditional Community Residential (R-TC) zoning districts the average site width varies from 80 to 120 feet where another 14 percent of the available sites are located.

The Zoning Code currently defines a family as "One or more persons, related or unrelated, living together as a single, nonprofit housekeeping unit as distinguished from a group occupying a hotel, club, fraternity or sorority house. A family shall be deemed to include necessary servants or domestic help."

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Persons with Disabilities

As part of a governmental constraints analysis, Housing Element law requires each jurisdiction to analyze potential governmental constraints to the development, improvement, and maintenance of housing for persons with disabilities, demonstrate local efforts to remove any such constraints, and provide for reasonable accommodations for persons with disabilities through programs that remove constraints.

Currently, the County does not have any formal processes for individuals with disabilities to make requests for reasonable accommodations with respect to zoning, permit processing, or building laws but the County does follow California's accessibility laws which require the following for multi-family residential developments:

- Multi-family developments containing 4–20 units require that all of their ground-floor units are adaptable (interior modifications) and meet accessibility requirements.
- Multi-family developments containing greater than 20 units require that 2 percent of the total units are adaptable and the remainder of the units are accessible.
- Single-family residential developments are exempt from accessibility requirements, but accessibility features for a single-family home may be added at the request of a homeowner.

To further comply with SB 520 requirements, the County has included **Policy E.1** stating that the County will develop a more formalized reasonable accommodation procedure that will provide an administrative exception process in zoning and land use matters for housing for persons with disabilities, as required by state law (SB 520).

Housing for Extremely Low-Income Households

Assembly Bill (AB) 2634 (Lieber, 2006) requires the quantification and analysis of existing and projected housing needs of extremely low-income households. Extremely low-income households typically comprise persons with special housing needs including, but not limited to, persons experiencing homelessness or near-homelessness, persons with substance abuse problems, and persons with mental illness or developmental disabilities. The Institute for Local Government's Housing Resource Center defines a single-room occupancy (SRO) unit as "a type of residential hotel offering one-room units for long-term occupancy by one or two people and may have a kitchen or bath facilities (but not both) in the room." The County does not explicitly define SROs in the Zoning Code, but has defined "rooming or boarding house" in the Zoning Code as "a dwelling, other than a hotel, where lodging or meals, or both, for four or more persons are provided for compensation." The County's Zoning Code currently permits rooming or boarding houses in the R-TC-MF zone. Rooming and boarding (but not boarding housing) is also allowed in the R-R zone. The County has amended the Zoning Code to include SROs in the definition of "rooming and boarding houses," allowed in the R-TC-MF zone and will continue to support the development of SROs or other types of housing affordable to extremely low-income households, the County will prioritize and leverage federal and state funding for the development of these units.

Limited Vacant Land Zoned for Multi-Family Housing

The Unincorporated area currently has limited vacant land zoned for multi-family development in the Homeacres area. While Solano County and local jurisdictions agree that development should occur within city boundaries, the lack of land zoned for multi-family development in the Unincorporated area significantly inhibits lower-cost housing construction. In addition, affordable housing developers cited the lack of available funding assistance in Solano County as an impediment toward the construction of subsidized affordable housing.

Farmworker Housing

Farmworker housing is defined in Sections 17021.5 and 17021.6 of the Health and Safety Code as any employee housing consisting of no more than 36 beds in a group quarters, or 12 units or spaces designed for use by a single family or household shall be deemed an agricultural land use. For the purpose of all local ordinances, employee housing shall not be deemed a use that implies that the employee housing is an activity that differs in any other way from an agricultural use. No conditional use permit, zoning variance, or other zoning clearance shall be required of this employee housing that is not required of any other agricultural activity in the same zone. The permitted occupancy in employee housing in an agricultural zone shall include agricultural employees who do not work on the property where the employee housing is located. Currently the County allows HCD agricultural employee housing by right in the Agricultural 20-160 (A-20 through A-180) zone and requires an administrative permit in the Suisun Valley (A-SV-20) zone. **Program D.1** states that the County will continue to allow HCD licensed farmworker housing as a permitted use as required by state law.

Secondary Dwelling Units

Secondary dwelling units are permitted in exclusive agriculture zones, and residential zones with the exception of multiple residence districts and duplex residence zones. Secondary dwelling units are limited in size and may be attached or unattached to the existing unit. Manufactured housing is permitted in residentially zoned areas but must adhere to the same site requirements as any other residential building constructed on a residential lot.

Manufactured Housing

SB 1960 (1981) prohibited local jurisdictions from excluding manufactured homes from all lots zoned for single-family dwellings; in other words, limiting the location of these homes to mobile home parks is forbidden. However, SB 1960 does allow the local jurisdiction to designate certain single-family lots for manufactured homes based on compatibility for this type of use. Currently, manufactured housing is treated the same as any other single-family home and therefore permitted by right in all residential zones. **Program C.3** states that the County will continue to permit manufactured dwelling units in all zoning districts by right.

Design Review

Residential development design review is required for any new construction in the A-SV-20, A-T-C and A-T-C-NC districts of Solano County. The purpose of design review is to promote a quality rural character in new development for Suisun Valley and to unify the design and construction of individual neighborhood agricultural tourist centers into the existing agriculturally focused context. The requirements for design review are described in the County's Zoning Ordinance and Chapter 4 of the Suisun Valley Strategic Plan.

The design review process ensures that new residential development preserves basic aesthetic principles and does not affect entitlements by allowing additional conditions to be placed on the project. The design review process adds proportionately insignificant costs to residential development and therefore is not a constraint to affordable housing.

Building Codes

Solano County currently uses the 2013 California Uniform Building Code, which includes accessibility requirements for commercial and public buildings. The County has had very few, if any, requests to retrofit existing commercial buildings in the Unincorporated area, but such retrofits would need to be in compliance with the Americans with Disabilities Act. In general, the County does not receive many, if any, requests for permits to retrofit homes for disabled access or to create group homes for the disabled. This is likely due to the fact that many services that would be desirable for disabled people do not exist in the more rural unincorporated areas (e.g., public transit, commercial centers, community centers) and these services are more conveniently available within the incorporated areas of the county.

The County's building regulations make provisions for the retrofit of homes and the construction of new homes for disabled persons. Any application for retrofit of homes or the construction of new homes for disabled persons would be processed the same as any building permit with no additional requirements. The County's building regulations do not act as a constraint on the provisions of housing for persons with disabilities.

Furthermore, retrofitting homes for disabled access in the county would not normally violate setback regulations, as existing lots are sufficiently sized and setback requirements are sufficiently shallow to accommodate wheelchair ramps in most cases. In those unique cases where, due to lot size and building placement in relation to setbacks, it is necessary to build a wheelchair ramp within the required setback area, wheelchair ramps would likely be low enough so as not to require that the wheelchair ramp comply with setback regulations. Such applicants would need a building permit for the improvements, just as other property owners would require a building permit for most building improvements. If a wheelchair ramp could not meet setback requirements, provisions in the Zoning Code provide for unenclosed porches or stairways to extend into setback areas. These provisions have been interpreted to include structures for disabled access. However, as part of the Zoning Code update, the code will be amended to clarify that facilities to provide disabled access for residential and commercial structures may encroach within the required setback areas. With the proposed amendment to the Zoning Code, the County's site development standards will not act as a constraint on the provisions of housing for persons with disabilities.

Solano County has adopted four amendments to the Uniform Building Code that address residential structures. The first requires that all materials applied as roof covering shall have a fire rating of class "B" in order to address health and safety by reducing the potential for the loss of the structure as a result of grass and wildland fires. This change in the code does not result in a significant increase in the cost of residential structures and will result in a greater protection of structure during grass and wildland fires. The second amendment allows the use of a "standard plan" which allows an approved plan to be used on separate parcels which reduces the cost of the Plan Review Fee for each identical structure. The third amendment allows fencing less than 6 feet tall, satellite dish antennas (unless attached to a structure or more than 15 feet above the ground) and purely agricultural nonresidential buildings less than 500 square feet on a 20-acre parcel of land to be except from building permits. The fourth amendment states that final inspections shall be made after final grading and when the building is completely ready for occupancy.

The Cordelia Fire Protection District, Dixon Fire Protection District, and Vacaville Fire Protection District have each amended their fire codes to require residential sprinkler systems within their districts. These districts have imposed this requirement to address health and safety concerns because of limited water supplies and longer response times to locations within the Unincorporated area. While residential sprinkler systems increase the cost of residential units, these fire districts have determined that the increased safety and fire protection provided by the sprinkler systems outweigh the increased cost of the residence.

Code Enforcement

Code enforcement in Solano County is conducted primarily on a complaint basis. The County seeks voluntary compliance whenever possible. Legal action is only taken when all voluntary options have been exhausted. Typically upon receipt of a complaint, an inspection is made with the property owner or tenant and a violation notice describing any violations, necessary corrective actions, and time frame for correcting the violations is issued. The property is reinspected and if violations have not been corrected, a second notice is issued. If after the third notice the violations have not been corrected, the complaint is referred to County Counsel or the District Attorney for legal action.

Site Improvements

The zoning district regulations set forth the basic site improvement requirements, which are summarized in **Table 36**. These regulations are standard requirements.

Table 38 summarizes the County Road Improvement Standards. No road improvements are required for subdivision of properties under the A-20, A-40, A-80, and A-160 zoning districts. Properties zoned R-R 10 and R-R 5 are required to meet private road standards if parcels do not front on a county public road, but no public road improvements are required for subdivision. Subdivisions of properties zoned R-R 2½ or greater density are subject to the public road improvement standards, and properties zoned R-TC-20 or greater density require concrete curbs, gutters, and sidewalks.

These improvement standards for subdivisions are equal to or less than those required in surrounding counties and cities and are not considered a constraint to residential development and the cost of housing.

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Table 38
Summary of Road Improvement Standards

Average Daily Traffic	Traveled Way	Paved Shoulder	Graded Shoulder	Total	Surface	Right-of-Way
Public Roads						
250 or less	20'	-	4'	28'	AC	60'
251–750	24'	-	4'	32'	AC	60'
751–4,000	24'	2'	4'	36'	AC	70'
4,001–10,000	24'	4'	4'	40'	AC	80'
More than 10,000	48'	8'	4'	72'	AC	100'
Private Roads						
1 parcel	(no requirements)				50'	
2–10 parcels	20'	-	4'	28'	CS	50'–60'
11 or more parcels	(same as public road requirements)					
Emergency Access Roads						
	12'	-	-	12'	AB	30'

Source: Solano County 2014

Notes:

1. All figures are minimums. Roadway widths shall be increased to accommodate on-street parking and/or designated bicycle routes, where warranted. Roads in areas planned or zoned for commercial or industrial uses shall have a width of traveled way and right-of-way 4 feet greater than the minimums shown in the table above. The Director of Transportation may, where warranted, impose additional or more stringent standards beyond those shown here.
2. For surface type, AC indicates asphalt concrete pavement, CS indicates double chip seal, and AB indicates compacted Class 2 aggregate base.
3. Residential streets in areas zoned for RR 1/2 or greater density shall have concrete curbs, gutters, and sidewalks. Concrete curbs, gutters, and sidewalks shall also be installed where a significant number of other properties in the neighborhood have existing curbs, gutters, and/or sidewalks, in commercial and industrial areas where warranted, and in other areas where required by the Director of Transportation. Roadway widths in areas with curbs, gutters, and sidewalks shall be increased to accommodate on-street parking, where warranted.

Fees

Solano County does not charge development fees for planning applications and permits, as development/capital improvement fees are generally linked to building permit approvals. **Table 39** shows the 2014 County's planning fees and **Table 40** shows total County fees for certain residential building types in Unincorporated areas of Solano County. The single-family dwelling, triplex and 850 square foot secondary dwelling unit represent fees in the area of the Unincorporated County closest to Vallejo. This is the only area of the unincorporated County that could see multifamily development. Secondary dwelling units are limited to a maximum of 850 square feet in this area. However, larger secondary dwelling units are allowed in other zones and areas of the Unincorporated County up to a maximum of 1,800 square feet. Therefore, fee estimates for an 1,800 square foot secondary dwelling unit have also been included in **Table 40**. Fire impact fees are administered in three fire districts. Cordelia Fire District charges \$1.94 per square foot and Vacaville Fire District charges \$1.62 per square foot. Suisun Fire District charges \$3,057 for a single-family dwelling, \$2,209 for each multi-family unit, or \$1.62 per square foot for

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every other dwelling type. Each fire district is also likely to charge a fee to review sprinkler systems which are now required in single-family dwellings. Recording fees for manufactured homes are currently \$22 per unit. School district impact fees also vary by school district throughout Solano County, ranging from \$2.97 per dwelling square foot in Benicia to \$4.99 per square foot in Fairfield, applying to both single-family and multi-family dwellings. The average of \$3.98 per square foot has been used in the fees in **Table 40** and in the fee estimates in **Table 41** below.

Table 39
Planning Fees, 2014

Service	Fee
Architectural Review	\$745.00
Initial Study	\$1,046.00
Negative Declaration	\$4,168.25
General Plan Amendment	\$4,770.00
Zoning Text Amendment	\$2,980.00
Administrative Permit	\$745.00
Rezone	\$3,280.00
Sign Permit	\$447.00
Lot Line Adjustment	\$2,556.00
Minor Subdivision	\$4,985.00
Architectural Review	\$745.00
Initial Study	\$1,046.00
Negative Declaration	\$4,168.25
Major Subdivision	\$6,942.00
Policy Plan Overlay	\$3,353.00
Variance Permit	\$1,118.00
New Use Permit Application	\$5,870.00
New Minor Use Permit Application	\$2,467.00

Source: Solano County, 2014

* Please note, there are no additional Board of Supervisor fees on top of the Planning Commissions fees.

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Table 40
Total County Fees for Certain Building Types, 2014

	Vallejo Area 1,500 sf Single Family Dwelling	Vallejo Area 660 sf Triplex Unit	Vallejo Area 850 sf Secondary Dwelling Unit	1,800 sf Secondary Dwelling Unit
Estimated Valuation	\$400,000	\$220,000	\$117,161	\$286,981
Fees				
County Fees				
<u>Plan Check Fees</u>				
Building	\$1,737.94	\$1,082.74	\$711.46	\$1,326.62
Planning	\$373.00	\$373.00	\$373.00	\$373.00
County Fire	\$0.00	\$0.00	\$0.00	\$0.00
Transportation	\$75.00	\$75.00	\$75.00	\$75.00
Flood Zone Determination	\$29.00	\$29.00	\$29.00	\$29.00
Grading Engineer	\$100.00	\$100.00	\$100.00	\$100.00
Addressing	\$149.00	\$149.00	\$149.00	\$149.00
Microfilm	\$10.00	\$10.00	\$10.00	\$10.00
<u>Permit Fees</u>				
Building	\$2,673.75	\$1,665.75	\$1,094.55	\$2,040.95
Electrical, Mechanical, Plumbing	\$600.00	\$150.00	\$600.00	\$1,250.00
County Capital Improvement	\$8,962.00	\$6,726.00	\$4,575.00	\$4,575.00
Estimated Inspections	\$1,248.00	\$520.00	\$1,248.00	\$1,248.00
Strong Motion Indicator	\$84.00	\$46.20	\$24.60	\$60.27
State Green Building program	\$16.00	\$9.00	\$5.00	\$12.00
<u>Other Possible County fees (not always applicable)</u>				
Encroachment Permit	\$410.00	\$136.67	\$410.00	\$410.00
Road Impact fees	n/a	n/a	n/a	n/a

A p p e n d i x A : H o u s i n g N e e d s A s s e s s m e n t

	Vallejo Area 1,500 sf Single Family Dwelling	Vallejo Area 660 sf Triplex Unit	Vallejo Area 850 sf Secondary Dwelling Unit	1,800 sf Secondary Dwelling Unit
Grading	n/a	n/a	n/a	n/a
Total County Fees	\$16,467.69	\$11,072.35	\$9,404.61	\$11,658.83
Other Non-County Fees				
School District (average of \$3.98/sf)	\$5,970.00	\$2,626.80	\$3,383.00	\$7,164.00
Fire Sprinkler Review	\$150.00	\$66.00	\$85.00	\$180.00
Fire Impact	\$1,980.00	\$871.20	\$1,122.00	\$2,376.00
Fire District Plan Review	\$108.33	\$108.33	\$108.33	\$108.33
Total Fees	\$22,587.69	\$13,765.15	\$12,872.61	\$19,002.83

Source: Solano County 2014

The County determines permit costs based on the valuation of each project. For example, based on a 1,500-square-foot single family home with a 400-square-foot garage, the approximate fees would be \$8,769. Based on the fees in **Table 40**, the average per-unit fee cost is approximately \$22,588 for a single-family home, \$13,765 for a multi-family triplex unit, \$12,872 for an 850 sf secondary dwelling unit and \$19,003 for an 1,800 square foot secondary dwelling unit (see **Table 40**). Based on the estimated cost of the project, the fees are estimated to make up 5.6 percent of the total cost for a single-family home, 6.3 percent for a multi-family unit, 11.0 percent for an 850 sf secondary dwelling unit, and 6.6 percent for an 1,800 sf secondary dwelling unit.

Table 41
Cost for Typical Residential Developments in the Unincorporated County

Development Cost for a Typical Unit	Single-Family ¹	Multi-Family ²	850 sf Secondary Dwelling Unit ³	1,800 sf Secondary Dwelling Unit ⁴
Total estimated fees per unit	\$22,587.69 per unit	\$13,765.15 per unit	\$12,872.61 per unit	\$19,002.83 per unit
Typical estimated cost of development per unit (construction and land costs)	\$400,000	\$220,000	\$117,161	\$286,981
Estimated proportion of fee cost to overall development cost per unit	5.6% per unit	6.3% per unit	11.0% per unit	6.6% per unit

Source: Solano County 2014; building-cost.net 2014

¹ Single-family based on 1,500 sq. ft. dwelling in the area of the Unincorporated County adjacent to Vallejo.

² Multi-family based on a 660 sf triplex unit in the area of the Unincorporated County adjacent to Vallejo.

³ 850 sf secondary dwelling unit in the area of the Unincorporated County adjacent to Vallejo.

⁴ 1,800 sf secondary dwelling unit in the Unincorporated County.

Permit Processing

The permit approval process can have an effect on housing costs. Lengthy processing of development applications can add to construction costs. Expediting review of developments that will offer lower- and moderate-income housing could be an incentive. The Planning Services Department complies with the Permit Streamlining Act, which sets deadlines for plan review. In the case of subdivision applications, the Planning Services Department has 30 days after the application is submitted to determine whether the application is complete.

In the case of parcel map subdivision (a subdivision resulting in four or fewer parcels), once the application is complete, the Department of Resource Management will normally take between 60 to 90 days to process the Tentative Parcel Map, allowing time for review by all pertinent agencies. Tentative Parcel Maps are subject to a public hearing by the Zoning Administrator prior to approval. Once a Tentative Parcel Map is approved, the applicant generally has two years to finalize this action through recordation of a Parcel Map, which is processed through the Department of Resource Management, Public Works Division (unless a Parcel Map waiver is approved, in which case the Tentative Parcel Map is finalized through recordation of a Certificate of Compliance).

A Final Map subdivision (a subdivision of five parcels or more) is processed generally in the same way as a Parcel Map subdivision, except that a Tentative Map is subject to review by the Solano County Planning Commission as the "advisory agency" and is subject to approval by the Board of Supervisors. Once a Tentative Map is approved, the applicant generally has two years to finalize this action through recordation of a Final Map, which is also processed through the Public Works Division. Based on experience, the Department of Resource Management estimates the average Final Map subdivision application will take anywhere between six and eight weeks longer than the Parcel Map subdivision process, but this varies on a case-by-case basis.

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Both Parcel Map and Final Map subdivisions usually require a negative declaration of environmental impact before they can be approved, although in some cases both Parcel Map and Final Map subdivisions may be required to obtain an environmental impact report.

After the applicant completes the subdivision process, the applicant can submit a building permit application to the Department of Resource Management's Building and Safety Division. The applicant must submit four sets of plans; review by the Building and Safety Division normally takes up to two weeks or 10 business days. The plans also must be submitted to the fire district, Environmental Health Services Division, and Planning Services Division for approval. Overall, the Building and Safety Division estimates a complete building permit application takes approximately one month to process before a building permit is issued, unless more information or corrections are required from the applicant.

In total, approval for construction of a single-family housing unit in an area zoned for single-family housing development typically takes approximately 60 days, including secondary review, from start to finish, assuming no special conditions.

In some cases, properties must be rezoned to a residential zoning district consistent with the General Plan prior to subdivision. The County will process rezoning applications concurrently with subdivision applications, and rezoning applications can be processed within the same time periods as subdivisions. Rezoning applications are subject to environmental review. The environmental documents prepared for the rezoning applications also incorporate the subdivision into the same environmental document.

Multi-family projects are allowed uses in the R-TC-MF and R-TC-MU zoning districts subject to a building permit, which are processed in the same manner and time frame as building permits for single-family housing units. There are no other permits or reviews that are required that would act as a constraint to the provision of multi-family housing. Multi-family projects take approximately 60 days from start to finish including secondary review.

Table 42 shows typical time frames for permit processing.

Table 42
Timelines for Permit Procedures

Type of Approval or Permit	Typical Processing Time
Ministerial Review	30 days for plan check
Conditional Use Permit	2-6 months
Zone Change	6 months
General Plan Amendment	6 months
Parcel Maps	3-6 months
Initial Environmental Study	1-3 months
Environmental Impact Report	6-12 months

Source: Solano County 2014

RESOURCES

Regional Housing Needs Allocations (RHNA)

Pursuant to state law (California Government Code Section 65584), at five-year intervals HCD and regional councils of government (ABAG for Solano County) must determine each locality's share of regional housing need. In conjunction with the state-mandated Housing Element update cycle that requires Bay Area jurisdictions to update their Housing Elements by January 31, 2015, ABAG has allocated housing unit production needs for each jurisdiction in the Bay Area. These allocations set housing production goals for the RHNA projection cycle that runs from January 1, 2014 through October 31, 2022.

AB 2634 (2006) requires jurisdictions to quantify the projected housing needs of extremely low-income households. Extremely low-income households are defined as those households earning less than 30 percent of the AMI. In order to project the housing needs of extremely low-income households, HCD recommends that jurisdictions plan that 50 percent of the very low-income household RHNA represents the projected number of extremely low-income households. The 2014–2022 very low-income housing allocation for the Unincorporated area of Solano County is 26; thus the projected number of extremely low-income households is 13.

Table 43 provides a summary of ABAG's housing need allocation for the Unincorporated area of Solano County.

Table 43
Regional Housing Need for Solano County

Income Level	Units	Percentage
Extremely Low	13	13%
Very Low	13	13%
Low	15	14%
Moderate	19	18%
Above Moderate	43	42%
Total	103	100%

The Unincorporated area's housing share represents approximately 1.4 percent of the total housing units allocated to Solano County for the period. For comparison, Vacaville's housing allocation represents approximately 16 percent of the County's total allocation and Vallejo's housing allocation represents 20 percent of the County's total allocation.

Sites Inventory Analysis

ABAG has projected that the Unincorporated County will add 103 housing units between 2014 and 2022 and has allocated such units as the County's fair share allocation of housing units. This analysis provides a summary of the County's progress toward meeting ABAG's fair share allocation as well as identifies vacant parcels suitable for accommodating the remainder of the County's fair share allocation.

Progress towards Achieving RHNA

The sites inventory and analysis is intended to inform the County of available land suited for residential development through the remainder of the RHNA projection cycle (2022). According to ABAG, the number of housing units in the Unincorporated area is expected to grow by 103 units between 2014 and 2022. As shown in the analyses of the County's RHNA, the housing unit allocation is distributed amongst various income ranges. In order to determine the remaining housing unit need and surplus in each income category, an analysis is provided below.

Approved and Constructed Units to Date

Although the ABAG planning period doesn't start until January 31, 2015, the RHNA period started January 1, 2014; any units constructed since the beginning of 2014 can be counted as progress toward the County's RHNA. Since January 1, 2014, there have been nine housing units added to the County's housing stock. Of these nine housing units, there were four single-family homes, one manufactured home, and four secondary dwelling units.

Single-family homes

As previously presented in **Table 29** in the section titled "Housing Costs and Affordability," single-family home prices are affordable to moderate- and above moderate-income households in the county. In the current planning period (2014–2021) ABAG allocated 19 housing units for moderate-income households and 43 for above moderate-income households to the County. Since January 1, 2014, there have been four single-family housing units constructed, which meets the projected moderate-income housing need as well as a share of the above moderate-income housing need. In **Table 43**, the four single-family homes are allocated toward meeting the moderate and above moderate housing need.

Manufactured homes

Since January 1, 2014, there has been one additional manufactured home added to the County's housing stock. Based on a 2014 Internet survey and costs provided by regional builders and information provided by builders for the previous Housing Element, the cost of new manufactured housing (including land) ranges between \$70,000 to as high as \$350,000. However, a 2014 survey suggests that the cost of land and installing a new manufactured unit is in the lower portion of the range at roughly \$100,000. The developers mentioned that most manufactured housing developed in the county serves cost-constrained families, providing an affordable alternative to traditional stick-built development. **Table 29** shows that a four-person, low-income households can afford a maximum sales price of \$212,227, meaning manufactured housing is theoretically affordable to low-income households. However, to provide a conservative estimate, the County will include manufactured homes as moderate-income housing in this assessment. As previously mentioned, there has been one manufactured housing units added to the County's housing stock since the beginning of 2014, which has been allocated toward the County's moderate-income fair share housing need.

Secondary Dwelling Units

There have been four second units constructed in the county since the start of the planning period (January 1, 2014). Second units are typically developed in the county for various needs including to house family members related to the occupants of the primary residence, as market rate rental units, or as farmworker housing; it is therefore difficult to survey rental rates of second units. However, secondary dwelling units must be used as residential units and cannot simply be accessory to the primary residence and uses for something like an office, storage, or commercial uses. Non-residential uses would be a violation of the building permit and occupancy rating. County staff indicates that, due to the relatively low cost of construction (zero land cost and generally smaller in scale), second units primarily serve as housing units for lower-income households.

There is no current available data for second unit rental rates in the county. The County is using the studio rent rates identified in **Table 30** as a proxy for second unit rental rates. The average monthly rent of studios in the unincorporated county is \$925. As shown in **Table 29**, low-income households can afford between \$1,137 (1-person) and \$1,625 (4-person) in monthly housing cost without being cost burdened. Although this income range is above the average studio rental of \$925, the County conservatively considers these types of units appropriate for low-income households. Comparing the rental rates with the affordability of low-income households shows that the additional four second units meets the County's low-income fair share housing allocation.

Vacant Land Analysis

There are two land use categories in the County that are zoned for residential development: Residential Traditional Community Districts (R-TC) and the Rural Residential District (R-R). Each of these districts allows the construction of single-family homes, which are likely to be the residential use type available for above moderate-income households. In addition, the R-TC-MF and R-TC-D zones allow multi-family and duplex development, respectively. These types of housing units are considered appropriate for moderate-income households.

As discussed, the County has a remaining need of 94 units (37 for the lower-income need, 18 for the moderate-income need, and 39 for the above moderate-income need). To meet the remaining need, the County will depend on secondary dwelling units, manufactured homes, and land zoned for low- and medium-density residential development.

All low-density vacant sites have an assumed realistic capacity of one unit per site. If subdivided some of the low-density parcels in Appendix C could accommodate more than one unit. Realistic capacity for the medium-density sites was determined by multiplying the number of acres by the maximum allowed density for the site, and then 80 percent of that result was used as the final realistic unit number to account for site and regulatory constraints. The County intends to use secondary dwelling units to meet the remaining need for the lower-income category. As mentioned above, four second units were added in the Unincorporated County between January 1, 2014 and June 1, 2014, and are affordable to low-income households. In addition to allowing secondary dwelling units in residential zones the County's agriculture zoning allows for a primary residence and a secondary unit, assumed to primarily serve farmworkers. Currently there are approximately 335,000 acres of land zoned agriculture. It can be assumed that some of the secondary dwelling units permitted in the previous and current Housing Element planning periods will serve farmworkers. As illustrated in **Table 44**, there has been an upward trend in the number of second units developed each year since 2009. Based on the average number of secondary dwelling units since the previous Housing Element was adopted, the

County believes the trend will continue and anticipates averaging at least 5 additional second units per year through 2022. Under this informed assumption, the County expects there to be 41 additional secondary dwelling units constructed by the end of the RHNA projection cycle. In order to facilitate the permitting and construction of secondary dwelling units, the County will continue to implement **Program B.2**.

Table 44
Historical Second Unit Construction

Year	Number of Second Units
2009	2
2010	2
2011	7
2012	6
2013	8
January – June 2014	4

Source: Solano County 2014

The County also intends to use manufactured homes to meet the remaining need for the moderate income category. As mentioned above, one unit was added in the Unincorporated County between January 1, 2014 and June 1, 2014, and is affordable to moderate-income households. **Table 45** illustrates the historical construction trend of manufactured homes in the unincorporated portion of the county since 2008. Since 2008, the county is averaging over two manufactured homes per year. As a conservative estimate, the County will assume there will be two additional manufactured homes developed each year through 2021, for a total of 14 additional units.

Table 45
Historical Manufactured Home Construction

Year	Number of Manufactured Homes
2008	9
2009	2
2010	1
2011	1
2012	2
2013	4
January – June 2014	1

Source: Solano County 2014

Table 46 illustrates that, with the commitment to secondary dwelling units and the available vacant land, the County has the capacity to meet its 2014–2022 RHNA. The totals in **Table 46** only include parcels that are not constrained by factors such as being located in a flood plain or having prime agricultural land. The vacant land capacity assumes no subdivision of current land. However, if land were to be subdivided, the county's total capacity would be significantly higher (1,380 units, up from 594 units) in its vacant parcels without environmental constraints. For the purpose of this inventory, 24 units that could be developed in duplex, multi-family, and

Appendix A: Housing Needs Assessment

mixed-use zones count toward the moderate totals. Additionally, the projected 14 manufactured units mentioned above would be developed in lower-density zones, but would also count toward the moderate category based on sales price trends for manufactured homes. Vacant parcels in all other residential zones, which allow single-family residences only, count toward the above moderate-income group total. For a map and table with a complete summary of vacant parcels in the Unincorporated county, see Appendix C.

Table 46
Land Inventory Summary and Ability to Meet RHNA

Income Group	RHNA Allocation	Approved or Constructed Units	Remaining RHNA	Projected Second Units	Vacant Land Capacity	RHNA Surplus
Extremely Low	13	4 ^{1,2}	37	41	0	4
Very Low	13					
Low	15					
Moderate	19	1 ³	18	0	38 ⁵	20
Above Moderate	43	4 ⁴	39	0	552 ⁶	513
Total	103	9	94	41	590	537

Notes:

1. The extremely low, very low, and low income categories have been combined in some of the columns in the table above to make up the lower-income RHNA. This approach is acceptable per HCD guidance.
2. Four secondary dwelling units affordable to low-income households.
3. One manufactured home affordable to moderate-income households.
4. Four single-family homes affordable to above moderate-income households.
5. The 38 units include 24 that could be developed on vacant land with appropriate densities for development of moderate income units (R-TC-D6, R-TC-MF, and R-TC-MU). The remaining 14 units are projected manufactured homes installed on land that would otherwise be considered appropriate for above moderate-income housing.
6. The above moderate total excludes 14 parcels that would accommodate the 14 projected manufactured units, as described in note 5.

Multifamily Opportunity

In addition to meeting the RHNA, the County has additional sites to accommodate a variety of housing types. The County General Plan identifies an Urban Residential designation which allows for up to approximately 25 units per acre (currently there are 1,890 acres of land designated Urban Residential) but does not have a corresponding zoning district that allows for the same density. This is because the County believes while some development has been allowed to occur where limited urban services were provided by cities and special districts, current General Plan policies supported by a voter approved initiative maintain that “what is urban should be municipal,” meaning that development requiring urban services should occur within an incorporated city. This position was taken in the belief that cities can provide urban services more efficiently. This policy is at the heart of the General Plan policies which encourage city-centered growth with residential development provided in close proximity to employment and commercial centers minimizing urban sprawl, travel distances, energy consumption, and noise and air pollution.

To encourage the development of these sites, the County will continue to work with the adjacent cities to encourage that their prezoning of these sites (where deemed appropriate) can accommodate housing for up to 25 units per acre and the County will facilitate the annexation process of these sites into the cities when the cities are ready to annex. Upon annexation of these sites into the cities, the County, if necessary, will also negotiate a transfer of RHNA units that will be accommodated on these sites. The County has negotiated successful RHNA transfers in the past and will continue to work with the neighboring cities to facilitate compact development to address climate change and energy conservation, and maximize land resources to preserve agricultural and open space resources.

The County has had success with this approach. Since adoption of the previous Housing Element the unincorporated Train Station area was annexed by the City of Fairfield in 2012. Since the RHNA is based on lands in the sphere of influence being credited to the city, no transfers of RHNA were necessary during the 5th RHNA cycle. However to support the assumption that areas of the unincorporated County that have been annexed will accommodate a greater portion of the overall County RHNA, Fairfield is responsible for a much greater portion of the overall County RHNA in the 5th cycle. In the 4th cycle Fairfield was responsible for 13 percent of the overall Solano County RHNA. In the 5th cycle Fairfield is responsible for 44 percent of the overall Solano County RHNA.

In addition the County supports projects in the incorporated cities to support lower-income households. The County recently provided financial support for a lower-income residential development in Vallejo. This development consisted of acquisition and rehabilitation of a multi-unit complex in the City of Vallejo. In addition to commercial/gallery space and a café, 29 affordable live/work units were created. In exchange for a \$1.7 million loan for the construction of the complex, the City agreed to allow the County to take credit for 13 of the 29 affordable dwelling units for purposes of meeting its very low and extremely low income RHNA obligation.

Environmental Constraints

Some vacant parcels in the county are constrained by flooding or contain prime agricultural land. These parcels have been excluded from the vacant land inventory. The totals above are for unconstrained parcels only.

Financial Resources

Due to the high costs of developing, maintaining, and rehabilitating housing, multiple funding sources are often required. **Table 47** lists the potential financial resources available to the County for housing development, rehabilitation, and financing.

Appendix A: Housing Needs Assessment

Table 47
Financial Resources

Program Name	Description	Eligible Activities
Federal Programs		
Community Development Block Grant (CDBG)	Grants administered and awarded by the state on behalf of HUD to cities through an annual competitive process.	Acquisition Rehabilitation Homebuyer Assistance Economic Development Infrastructure Improvements Homeless Assistance Public Services
HOME Investment Partnership Act Funds	Flexible grant program for affordable housing activities awarded by the state on behalf of HUD to individual cities through an annual competitive process.	Acquisition Rehabilitation Homebuyer Assistance New Construction
Section 8 Rental Assistance Program	Rental assistance payments to owners of private market-rate units on behalf of very low-income tenants.	Rental Assistance
Section 203(k)	Single-family home mortgage program allowing acquisition and rehabilitation loans to be combined into a single mortgage.	Land Acquisition Rehabilitation Relocation of Unit Refinancing of Existing Indebtedness
Mortgage Credit Certificate Program	Income tax credits available to first-time homebuyers to buy new or existing single-family housing. Local agencies make certificates available.	Homebuyer Assistance
Low-Income Housing Tax Credit (LIHTC)	Tax credits are available to persons and corporations that invest in rental housing for lower-income households. Proceeds from the sale of the credits are typically used to create housing.	New Construction Acquisition Rehabilitation Historic Preservation
Emergency Shelter Grant Program	Program funds to rehabilitate and operate emergency shelters and transitional shelters, provide essential social services, and prevent homelessness.	Support Services Rehabilitation Transitional Housing Supportive Housing

A p p e n d i x A : H o u s i n g N e e d s A s s e s s m e n t

Program Name	Description	Eligible Activities
Rural Development Loans and Grants	Capital financing for farmworker housing. Loans are for 33 years at 1 percent interest. Housing grants may cover up to 90 percent of the development costs of housing. Funds are available under the Section 515 (Rental Housing), Section 502 (Homeownership Loan Guarantee), Section 514/516 (Farm Labor Housing), and Section 523 (Mutual Self-Help Housing) programs.	Purchase Development/Construction Improvement Rehabilitation
State Programs		
Multi-Family Housing Program (MHP)	Deferred payment loans for new construction, rehabilitation, acquisition, and preservation of permanent and transitional rental housing.	New Construction Rehabilitation Acquisition Preservation
California Housing Finance Agency (CHFA) Residential Development Loan Program	Low interest, short-term loans to local governments for affordable infill, owner-occupied housing developments. Links with CHFA's Down Payment Assistance Program to provide subordinate loans to first-time buyers. Two funding rounds per year.	New Construction Rehabilitation Acquisition
California Housing Finance Agency (CHFA) Homebuyer's Down Payment Assistance Program	CHFA makes below market loans to first-time homebuyers of up to 3 percent of sales price. Program operates through participating lenders who originate loans for CHFA. Funds available upon request to qualified borrowers.	Homebuyer Assistance
Low-Income Housing Tax Credit (LIHTC)	Tax credits are available to persons and corporations that invest in low-income rental housing. Proceeds from the sale are typically used to create housing.	New Construction Rehabilitation
California Self-Help Housing Program	State program that provides technical assistance grants and loans as well as deferred payment on conditionally forgivable mortgage assistance loans for the rehabilitation or construction of new affordable housing.	New Construction Rehabilitation

Appendix A: Housing Needs Assessment

Program Name	Description	Eligible Activities
Tax-Exempt Housing Revenue Bond	Supports low-income housing development by issuing housing tax-exempt bonds requiring the developer to lease a fixed percentage of the units to low-income families at specified rental rates.	New Construction Rehabilitation Acquisition
Local Programs		
Redevelopment Housing Set-Aside Funds	State law required that 20 percent of redevelopment agency funds be set aside for a wide range of affordable housing activities. The redevelopment agency has been dissolved but some set-aside funds remain.	Rehabilitation
Single-Family Mortgage Revenue Bond	Issues mortgage revenue bonds to support the development and improvement of affordable single-family homes to qualified households.	New Construction Rehabilitation Acquisition
Employment and Human Services Department	Assists very low-income households to obtain/maintain housing.	Relocation Emergency Grants Housing Scholarships
East Bay Delta Housing Finance Agency Lease-Purchase Homeownership Program	The agency purchases homes on behalf of lease-purchasers and manages the lease agreements during the 38-month lease purchase period. Eligible households receive down payment assistance and assume the loan at the end of the lease-purchase term.	Homebuyer Assistance
Private Resources/Lender/Bank Financing Programs		
Federal National Mortgage Association (Fannie Mae) Community Homebuyers Program	Fixed-rate mortgages issued by private mortgage insurers.	Homebuyer Assistance
	Mortgages that fund the purchase and rehabilitation of a home.	Homebuyer Assistance Rehabilitation
	Low down payment mortgages for single-family homes in underserved low-income and minority cities.	Homebuyer Assistance
California Community Reinvestment Corporation (CCRC)	Nonprofit mortgage banking consortium designed to provide long-term debt financing for affordable rental housing. Nonprofit and for-profit developers contact member banks.	New Construction Rehabilitation Acquisition

A p p e n d i x A : H o u s i n g N e e d s A s s e s s m e n t

Program Name	Description	Eligible Activities
Federal Home Loan Bank Affordable Housing Program	Direct subsidies to nonprofit and for-profit developers and public agencies for affordable low-income ownership and rental projects.	New Construction
Freddie Mac	Home Works - Provides first and second mortgages that include rehabilitation loan. County provides gap financing for rehabilitation component. Households earning up to 80 percent MFI qualify.	Homebuyer Assistance combined with Rehabilitation
Bay Area Local Initiatives Support Corporation (LISC)	Provides recoverable grants and debt financing on favorable terms to support a variety of community development activities including affordable housing.	Acquisition New Construction Rehabilitation
Northern California Community Loan Fund (NCCLF)	Offers low-interest loans for the revitalization of low-income communities and affordable housing development.	Acquisition Rehabilitation New Construction
Low-Income Investment Fund (LIHF)	Provides below-market loan financing for all phases of affordable housing development and/or rehabilitation.	Acquisition Rehabilitation New Construction

Homeless Resources

Homeless persons or those who are about to be homeless may contact the Solano County Health and Human Services Department. The County and volunteers operate a telephone help-line, First Call for Help, and a shelter bed hotline. The department has a limited number of vouchers, redeemable at local motels, for temporary shelter.

Mission Solano Rescue Mission

Since 1998, the Mission Solano Rescue Mission has successfully met the basic necessities of the homeless and poverty-stricken population residing in Fairfield. Recognizing that many people struggling with addiction needed more than "three hots and a cot," Mission Solano focused on developing long-term residential treatment for homeless addicted men, women, and children. The nationally recognized Nomadic Sheltering Program provides emergency shelter nights to those in need, while continuing to offer the Community Outreach Center and Social Industries distributing food, clothing, and ongoing community services. Their doors are open 24 hours a day, 365 days a year. Help is available without charge to any person regardless of race, color, creed, or social standing. Mission Solano operates entirely on voluntary contributions, with the majority of the support coming from individual donors and the balance from churches, organizations, foundations, and the corporate community.

Community Resources Services (Rosewood House)

Community Resources Services offers case management for homeless clients, assisting them with basic needs, job searches, school reentry, and housing information. During a 2013 point in time survey, eight women were residing at the Rosewood House. Services are also provided for incarcerated clients in the county jails. The services provided prepare jail clients for a successful return to the community, where they can rejoin families, find work, and participate meaningfully in the community.

Rosewood House provides clean and sober transitional housing for women. The goals include assisting participants with obtaining permanent housing, achieving greater self-determination, and increasing their skills and education. Women completing their stay at Rosewood House will be better prepared to obtain permanent housing and participate within the community.

Community Action North Bay

Community Action North Bay (CAN-B) provides basic needs such as food, clothing, and shelter and also provides supportive services such as rental assistance, job training, life skills classes, homeless assistance and prevention, and case management. In addition, CAN-B provides information about and referrals to other community-based organizations, churches, and/or government agencies that can help clients with additional needs. CAN-B serves almost 1,000 clients every year; its clients consist of the working poor, low income, senior citizen, disabled, and homeless population living in the Fairfield area. CAN-B also provides transitional and permanent supportive housing opportunities.

Heather House

Heather House provides temporary shelter, food, and case management to the homeless. The shelter has 24 beds and 3 transitional apartments for children, families, and single women. Clients receive assistance in job searches and in locating permanent housing, as well as life skills training which includes budgeting, parenting, and nutrition. CAN-B has partnered with Healthy Start, Child Haven, the Community Action Agency, The Salvation Army, Solano County Mental Health, Youth and Family Services, the Solano County Homeless Shelter Collaborative, and Child Protective Services to ensure that families are given the necessary tools to strengthen their families, clean up their credit/eviction issues, find gainful employment, and move into permanent housing.

Every year, approximately 200 homeless individuals stay at Heather House, while an additional 7,300 individuals are provided with referral services. Since 2004, 1,600 clients have completed the full program. Of the 200 served at Heather House each year, half are children. A 2013 point in time count surveyed 26 individuals residing at the Heather House. Of those who enter the 90-day program, 90 percent move on to permanent housing. Heather House is currently building a base for intellectual and academic capacity.

Caminar Solano (Laurel Creek House)

Caminar Solano opened Laurel Creek House in 1999, offering residential treatment in 12 beds. Not all of the persons served by Laurel Creek House would be homeless, but the facility does provide a service to residents who may have temporary shelter needs. Caminar Solano has expressed interest in developing a transitional housing project (15 apartments) for residents with mental disabilities.

Opportunities for Energy Conservation

With respect to residential construction, opportunities primarily take the form of construction of new homes using energy-efficient designs, materials, fixtures, and appliances, or retrofitting existing homes to be more energy efficient (e.g., weather stripping, upgrading insulation, upgrading to more energy-efficient fixtures and appliances). At a minimum, new housing construction in Solano County must comply with the state of California Title 24 energy efficiency standards. These requirements are enforced through the building plan check process.

In addition to the design and construction of individual buildings, the development industry is becoming increasingly aware of opportunities for energy conservation at the site planning level and even at the community planning level. New developments are increasingly being planned so that building orientations will take advantage of passive solar energy benefits. Larger-scale land use planning is increasingly considering benefits of compact urban form (i.e., higher densities) as a means to reduce auto dependency for transportation, and the benefits of mixed-use land use patterns to make neighborhoods more self-contained so that residents can walk or bicycle to places of work, shopping, or other services. Compact urban development patterns are necessary to improve the effectiveness of buses and other forms of public transit. If effective public transit is available and convenient, energy will be conserved through reduced auto use.

The fee charged for private solar or wind installation includes inspections and plan review, but the permit fee is zero dollars. The County issues residential solar permits over the counter for rooftop systems. For ground-mounted systems, the County has a one-week expedited process.

Appendix A: Housing Needs Assessment

The County has a voluntary Green Building Program that provides an opportunity for developers seeking to incorporate sustainable building materials and design into residential housing construction. The purpose of this program is to improve public health and welfare, assuring that homeowners, developers, and builders who wish to exceed Title 24 state energy efficiency standards by at least 15 percent to 20 percent have the opportunity to participate in a voluntary green building program designed to achieve the following:

- Encourage resource conservation.
- Reduce waste generated by construction projects.
- Increase energy efficiency.
- Promote the health and productivity of residents, workers, and visitors to Solano County.

The California Building Standards Commission recently adopted Green Building Standards as of July 2013, as amended for publication in the 2013 California Green Building Standards Code, CCR, Title 24, Part 11. These standards were published in July 2013 and adopted as part of the Building Codes for mandatory implementation. No voluntary tiers of the CALGreen have been adopted in Solano County.

Appendix

B REVIEW OF PREVIOUS HOUSING ELEMENT

"Planning for a Sustainable Solano County"

Appendix B: Review of Previous Housing Element

Housing Program	Accomplishments	Continue, Modify, or Delete Program
A. Housing Conservation and Rehabilitation		
<p>A.1 Financial Assistance - Rehabilitation. To assist private property owners in rehabilitating the housing stock, the County will consider applying for Community Development Block Grant funds and other funding sources as available including funding from the federal Department of Housing and Urban Development, the State Department of Housing and Community Development, local redevelopment funding, and other governmental or private sources.</p> <p>Responsibility: Resource Management</p> <p>Target Date: The County will consider applying for funds annually and as Notice of Funding Availability (NOFAs) are released.</p> <p>Funding Source: CDBG, HOME, Rehabilitation Loan Pool</p>	<p>During the previous planning period the County rehabilitated seven units, utilizing funds from HOME & CDBG. In addition, the County received a HOME grant in 2010 for rehabilitation and first-time homebuyer programs.</p>	<p>Modify to update language related to redevelopment set-aside funds and continue. Program A.3 will be combined into this program.</p>
<p>A.2 Program Partnerships - Rehabilitation. The County will seek to maintain its existing supply of assisted housing through the development of programs in coordination with other public and private non-profit housing agencies. The County will seek to expand rehabilitation opportunities by coordinating and working with financial institutions and non-profit agencies to expand the supply of funding available and by recycling program income from existing programs into future rehabilitation programs.</p> <p>Responsibility: Resource Management</p> <p>Target Date: The County previously contracted with Mercy Housing to monitor rent limitation agreements under the County Housing Rehabilitation Program but their contact expired in June 2008. The County may need to contract with a consultant in a year or two depending on interest in the program.</p> <p>Funding Source: Rehabilitation loan pool</p>	<p>The County has not monitored rent limitations since adoption of the previous Housing Element. No assisted units have converted to market rate since adoption of the previous Housing Element.</p>	<p>Modify to address potential units at risk for the 5th cycle planning period and continue.</p>
<p>A.3 Housing Assistance Outreach – Rehabilitation. As the County applies for and receives funding to provide rehabilitation loans they will notify the public of available housing rehabilitation programs in coordination with city housing authorities, redevelopment agencies and other public and private agencies.</p> <p>Responsibility: Resource Management, County Housing Authorities, City Redevelopment and Housing Authorities adjoining project areas.</p> <p>Target Date: 2009-2014 and ongoing as funding is available.</p> <p>Funding Source: CDBG, HOME, Rehabilitation Loan Pool</p>	<p>The County has notified the public of available housing rehabilitation funds throughout the 2007–2014 planning period through mailers and door-to-door marketing. In addition, Building inspectors and code compliance officers provide information in the field as needed.</p>	<p>Modify to remove reference to redevelopment agencies and combine into Program A.1.</p>

Appendix B: Review of Previous Housing Element

Housing Program	Accomplishments	Continue, Modify, or Delete Program
<p>A.4 Upon notification of a potential sale of a mobile home park and/or at the request of mobile home resident organizations or nonprofit housing agency, the County will provide assistance in seeking funding through the Mobile Home Park Resident Ownership Program for the purchase the mobile home park or spaces by the tenants</p> <p>Responsibility: Resource Management, County Housing Authority</p> <p>Target Date: 2009-2014, this program will be implemented upon notification of a potential mobile home park sale.</p> <p>Funding Source Mobile Home Park Resident Ownership Program (MPROP)</p>	<p>The County has not received notification of the sale of any mobile home park. The County does not expect resources to be available for this type of program during the 5th cycle planning period. This program will not be continued.</p>	Delete.
B. Opportunities for Housing Production		
<p>B.1. Countywide Housing Production and Coordination. The County will coordinate its planning and program efforts with the cities to ensure that adequate quantities of various housing types are provided to meet the County's total projected housing needs. The County inventoried its available sites for housing development and identified sites by zoning category that are available to meet its housing need allocation for the Housing Element Planning period. The inventory summarized in Appendix A includes sites for housing by income category. There are approximately 1,890 acres, which can accommodate 5,674 units.</p> <p>In addition to meeting the RHNA, the County has additional sites to accommodate a variety of housing types. The County General Plan identifies an Urban Residential designation which allows for up to 25 units per acre but does not have a corresponding zoning district that allows for the same density. This is because the County believes while some development has been allowed to occur where limited urban services were provided by cities and special districts, present General Plan policies maintain that "what is urban should be municipal," meaning that development requiring urban services should occur within an incorporated city.</p> <p>To encourage the development of these sites the County will work with the adjacent cities to ensure that their rezoning of these sites can accommodate housing for up to 25 units per acre and the County will facilitate the annexation process of these sites into the cities when the cities are ready to annex. Upon annexation of these sites into the cities, the County, if necessary will also negotiate a transfer of RHNA units that will be accommodated on these sites. The County has negotiated successful RHNA transfers in the past and will continue to work with the neighboring cities to facilitate compact development to address climate change, energy conservation and maximize land resources to preserve agricultural and open space resources.</p> <p>Responsibility: Resource Management</p> <p>Target Date: 2009-2014, continue to provide sites to meet the County's RHNA</p>	<p>This program is ongoing and will be continued. The County will generally support city annexation of land. The annexation of the Train Station area by the City of Fairfield took place in 2012. Since the RHNA is based on lands in the sphere of influence being credited to the city, no transfers of RHNA have been necessary during this RHNA cycle.</p>	Continue.

A p p e n d i x B : R e v i e w o f P r e v i o u s H o u s i n g E l e m e n t

Housing Program	Accomplishments	Continue, Modify, or Delete Program
<p>allocation of 99 units and continue contact the adjacent cities annually to discuss their plans for annexation and then work with the cities to negotiate annexations of land and transfers of RHNA where possible.</p> <p>Funding Source: County General Fund</p>		
<p>B.2 Secondary Dwelling Unit Program. To maximize the potential for housing development on its existing residentially zoned land, the County will continue to implement streamlined permitting processes for these types of units. The County will actively promote the opportunities provided to develop these types of units, by distributing information to advocates and service providers for the elderly and disabled populations and farmworkers as well as distributing this information within the agricultural community in general.</p> <p>Responsibility: Resource Management Target Date: Ongoing, distribute information annually. Funding Source: County General Fund</p>	<p>The agricultural community and the public are continually educated on allowances for second units in the county. Thirty-seven second units were permitted during the previous Housing Element planning period. Interest in second units is strong in the county and active marketing beyond disseminating information at the public counter is not necessary.</p>	<p>Modify to reflect the appropriate level of outreach and continue.</p>
<p>B.3 Housing Element Annual Report. As part of the Housing Element annual report the County will monitor the affordability of newly approved manufactured homes and second units to meet the needs of lower income households and review and revise programs as appropriate to maintain effective strategies to accommodate the housing needs of lower income households in the planning period.</p> <p>Responsibility: Resource Management Target Date: Ongoing, as projects are approved. Funding Source: County General Fund</p>	<p>The County is monitoring this information and including it in the annual reports on an ongoing basis, to the limited extent that income or specific use (rental, granny unit, student occupied, etc.) of the units can be determined. The County cannot ask for income or rental information. It makes certain assumptions that farm labor and second unit manufactured homes are generally occupied by low-income households, primary manufactured dwellings are occupied by moderate-income households, and conventional construction are occupied by moderate- to above moderate-income households.</p>	<p>Continue.</p>

Appendix B: Review of Previous Housing Element

Housing Program	Accomplishments	Continue, Modify, or Delete Program
C. Affordable Housing Assistance		
<p>C.1 Financial Assistance - Affordable Housing Production. The County will utilize available local funding sources for affordable housing, primarily involving application for CDBG funds from the state, HOME funds, and seeking to expand the County's Section 8 voucher program. Because of the competitive nature of the CDBG, HOME, and the Section 8 programs, it is not possible to estimate the amount of funding that could be obtained from these sources through the remainder of the Housing Element planning period. To leverage local subsidy sources, the County and County Housing Authority will seek funding for low-income housing assistance through state and federal housing programs in the development of local housing assistance programs.</p> <p>Responsibility: Resource Management</p> <p>Target Date: The County will continue to apply for funds annually and as Notice of Funding Available (NOFAs) are released.</p> <p>Funding Source: Section 8, CDBG, HOME, and other funding sources as they become available.</p>	<p>The County received a HOME grant in 2010 for rehabilitation and first time homebuyer programs. The County continues to be deemed a "high performer" in its Section 8 program by HUD. The County utilized Neighborhood Stabilization Program 3 funds in the unincorporated Vallejo area for rehabilitation, blight elimination, and gap financing for first time homebuyers. The County has not applied for Mortgage Credit Certificates (MCC) since 2012. The County also contributed money to the City of Vallejo to develop an income-restricted housing complex. As part of the process, an agreement between the City and County acknowledged that a certain amount of the units would be credited to the County's low-income RHNA requirements for the previous Housing Element RHNA cycle.</p>	Modify to include an appropriate approach to seeking funding, based on current County resources and market demand and continue.
<p>C.2 Regulatory Incentives for Affordable Housing. The County will continue to work with developers of affordable housing projects to provide regulatory incentives consistent with Sections 65915 and 65917 of the California Government Code and AB 1866, signed into law in September 2002.</p> <p>Responsibility: Resource Management</p> <p>Target Date: 2009-2014, provide regulatory incentives to affordable housing projects on a case-by-case basis as projects are processed through the Resource Management Department.</p> <p>Funding Source: General Fund</p>	No affordable housing projects were processed by the County during the planning period.	Continue.

A p p e n d i x B : R e v i e w o f P r e v i o u s H o u s i n g E l e m e n t

Housing Program	Accomplishments	Continue, Modify, or Delete Program
<p>C.3 Zoning Codes and Development Standards to Encourage and Facilitate Alternative Housing. To create opportunities for the private marketplace to produce additional affordable housing for extremely low-, very low-, low- and moderate-income households, including farm workers and the elderly, the County will continue to implement building and zoning codes to accommodate manufactured dwelling units and secondary dwelling units in all residential zoning districts by-right. The County is projecting the market will construct approximately 3 units.</p> <p>Responsibility: Resource Management Target Date: 2009-2014, continue to allow manufactured housing and second units. Funding Source: General Fund</p>	The County continues to allow manufactured homes and second units by right in residential districts and agricultural districts. Thirty-seven second units were permitted during the previous Housing Element planning period.	Continue.
<p>C.4 Preservation of Existing Assisted Housing Units. Currently, the 228 units of recently constructed military housing in the unincorporated area near Fairfield is the only assisted housing subject to rent restrictions in the unincorporated area, and this housing is not subject to conversion to market rates in the next ten years. Should other publicly-assisted affordable housing units be produced in the future, the County will monitor its status, identify any units at risk of conversion to market rate, and work proactively to preserve them, working with interested affordable housing developers and making preservation activities a priority use of available federal, state, and local financing sources in cases where it is more cost-effective to preserve affordable units than to build replacement affordable units.</p> <p>Responsibility: Resource Management Target Date: Ongoing, as projects are built and have affordability covenants on them they will be monitored. Funding Source: General Fund</p>	Implementation of this program has not been necessary during the 2007–2014 planning period. No publicly assisted affordable housing units have been produced. This program will be modified as the 228-unit military housing project and has been annexed into the City of Fairfield.	Modify to remove reference to the 228-unit military housing project that has been annexed into the City of Fairfield and continue.
<p>C.5 Program Partnerships – Affordable Housing. The County will work to ensure coordination between County and other public and private housing assistance programs and affordable housing developers, including coordinating resources for affordable housing production.</p> <p>The County will continue to work with the City of Vacaville to administer the Section 8 program; the County also applies for Mortgage Credit Certificates (MCC) from the California Debt Limit Allocation Committee, with the program administered by the City of Fairfield for first time homebuyers. The County has allocated some of the bond authority to the CRHMFA Homebuyers Fund which also provides for downpayment assistance.</p>	The City coordinates Housing Choice Voucher (Section 8) management with the City of Vacaville Housing Authority. The County has not applied for MCCs since 2012. However, it contracted with the City of Fairfield to operate the County's Neighborhood Stabilization Program (NSP) 3 program for target areas in the county and	Continue.

Appendix B: Review of Previous Housing Element

Housing Program	Accomplishments	Continue, Modify, or Delete Program
Responsibility: Resource Management and Housing Authority, City of Vacaville for Section 8 administration and City of Fairfield for first time homebuyer program. Target Date: 2009-2014, continue to apply for funding as it becomes available. Funding Source: General Fund	one area in the City of Fairfield.	
C.6 Housing Assistance Outreach – Affordable Housing. The County will notify the public of available affordable housing programs in coordination with city housing authorities, redevelopment agencies and other public and private agencies. Responsibility: Resource Management and Housing Authority Target Date: Notify public of available programs through flyers and the newspaper on a quarterly basis and post information on the County's website by August 2010. Funding Source: General Fund	Door-to-door flyers, mailings, and newspaper notices are provided, based on availability and demand for funds. Information relating to the housing programs is available on the County's website. Community meetings have also been convened which provide information regarding available programs. Building and code compliance inspectors keep program information on hand, and provide to the public in the field if funding may be able to assist individuals.	Modify to remove reference to redevelopment agencies and continue.
D. Special Housing Needs and Equal Housing Opportunity		
D.1 Financial Assistance – Special Needs Housing. The County will seek funding for special groups with specific demonstrated needs through federal, state and local housing assistance programs through the Solano County Housing Authority. Where unmet needs are demonstrated, the County will give preference in its funding decisions to projects addressing special housing needs. Responsibility: Resource Management, Housing Authority, Health and Social Services, Continuum of Care and Solano Safetynet Consortium – Community Action Agency. Target Date: Ongoing as funding becomes available. Funding Source: General Fund, HUD, FEFG, EHAP, CDBG, United Way	Section 8 housing provides priority to those with special needs and vouchers are used for this purpose. HOME funds were also secured during the previous planning period which makes special needs groups a priority.	Combine into Program D.4 and delete.
D.2 Farm Worker Housing - Production. The County will seek to coordinate programs and funding from State and Federal programs through the Dixon Housing Authority. The County will work with the Dixon Housing Authority to explore opportunities for expanding the Dixon Migrant Center. The County, through the County Housing Authority, will	Additional farmworker housing has not been in great demand. The ability to construct second units by right or by constructing	Modify to clarify some of the program language and continue.

A p p e n d i x B : R e v i e w o f P r e v i o u s H o u s i n g E l e m e n t

Housing Program	Accomplishments	Continue, Modify, or Delete Program
<p>provide assistance to the farming community and housing developers in obtaining loans and grants and processing applications for the rehabilitation and/or establishment of new farm labor housing under U.S.D.A. Rural Development and State Department of Housing and Community development programs and other funding sources that may become available. The County will develop an informational brochure explaining options, permitting process and possible funding sources for the development of farmworker housing. The County will also contact agricultural stakeholders and the non-profit community to discuss possible options for locating suitable and available sites for farmworker housing by the end of 2010. The County will then assist non-profit groups and stakeholders to pursue funding resources, water and sewage availability, and entitlements if necessary. In addition, the County will formulate and provide development incentives as funding permits for the provision of farmworker housing, expedite the permitting process for all farmworker housing projects, defer development fees for housing projects that provide farmworker housing, and provide special technical assistance from County staff for developers of farmworker housing projects.</p> <p>Farmworker housing, permitted by the State Department of Housing and Community Development, is an allowed use without the necessity of obtaining a use permit from the County. The State Department of Housing and Community Development will continue site inspections of migrant farm labor camps to ensure proper maintenance.</p> <p>Responsibility: Resource Management and HCD</p> <p>Target Date: Ongoing, develop an informational brochure explaining options, permitting process and possible funding sources for the development of farmworker housing by August 2010. The County will also contact agricultural stakeholders and the non-profit community to discuss possible options for locating suitable and available sites for farmworker housing by the end of 2010.</p> <p>Funding Source: As funding permits, General Fund, USDA Rural Development and State D CDBG and HOME funds</p>	<p>temporary third units with a use permit was requested by the farming community and has met their needs. The allowance for a third unit was to allow a farmer to house an agricultural employee if the permitted second unit was already utilized (by a farmworker, tenant, or relative). The Dixon Migrant Center has not been expanded and no grants or loans have been associated with it.</p>	
<p>D.3 Sites for Special Needs Housing. The County will continue to provide opportunities for development of facilities for emergency shelters ("community care facilities" with seven or more persons) in all residential zones with a use permit. The County's zoning regulations recognize residential care facilities with 6 or fewer persons as residential uses of property and therefore allow the development of a residential care facility (emergency shelter) with 6 or fewer persons as a permitted use subject to the same development standards as all other residential use types. The County's definition of community care facilities specifically includes emergency shelters, transitional housing and facilities for persons with disabilities. The County's Zoning Regulations identify emergency shelters as a residential care facility use type as part of the definition of a community care facility. In addition,</p>	<p>The County is currently processing amendments to allow emergency shelters and transitional and supportive housing in compliance with Senate Bill 2. The amendments will be completed prior to or at the same time as Housing Element adoption.</p>	Delete.

Appendix B: Review of Previous Housing Element

Housing Program	Accomplishments	Continue, Modify, or Delete Program
<p>the County will continue to fund the development of emergency shelters in neighboring incorporated cities that provide adequate water and sewer services.</p> <p>In addition to the standards for emergency shelters listed above, and to further comply with SB 2, the County has identified sites within a soon to be created Commercial Service type district. This district includes approximately 10.34 acres of existing buildings that range in size from 1000sf buildings to a couple of buildings with around 30,000sf of roof coverage. Most of the structures are commercial service or storage types of structures with some small offices which are all in good condition and can be reused for an emergency shelter. Reuse of any preexisting structure for an emergency shelters will be allowed by right without any discretionary review and will be consistent with the same standards in the same zone. These identified sites have services available to the preexisting structures and are located within close proximity to the proposed Fairfield/Vacaville train station.</p> <p>The County will continue to provide for the development of farmworker housing in its Agricultural zoning districts. The County amended the County Zoning Code to provide for farm worker housing that is permitted under State Department of Housing and Community Development as an allowed use.</p> <p>Currently the County's Zoning Code allows transitional and supportive housing under the community care facilities designation by right in all residential zones, for facilities with 6 or fewer people. Pursuant to SB 2 the County must explicitly allow both supportive and transitional housing types in all residential zones. The County shall update its Zoning Code to include separate definitions of transitional and supportive housing as defined in the Health and Safety Code Sections 50675.2 and 50675.14(see definitions below).</p> <p>Additionally, the County will amend the Zoning Code to allow both transitional and supportive housing types as a permitted use subject to only the same restrictions on residential uses contained in the same type of structure.</p> <p>Transitional housing is defined in Section 50675.2 of the Health and Safety Code as rental housing for stays of at least six months but where the units are recirculated to another program recipient after a set period. It may be designated for a homeless individual or family transitioning to permanent housing. This housing can take many structural forms such as group housing and multi-family units and may include supportive services to allow individuals to gain necessary life skills in support of independent living.</p> <p>Supportive housing is defined by Section 50675.14 of the Health and Safety Code as housing with linked on-site or off-site services with no limit on the length of stay and is occupied by a target population as defined in Health and Safety Code Section 53260 (i.e., low-income persons with mental disabilities, AIDS, substance abuse or chronic health conditions, or persons whose disabilities originated before the age of 18). Services linked to supportive housing are usually focused on retaining housing, living and working in the</p>		

A p p e n d i x B : R e v i e w o f P r e v i o u s H o u s i n g E l e m e n t

Housing Program	Accomplishments	Continue, Modify, or Delete Program
<p>community, and/or health improvement.</p> <p>Responsibility: Resource Management Target Date: Amend the Zoning Code by February 2011. Funding Source: General Fund, CDBG, and HOME</p>		
<p>D.4 Program Partnerships – Special Housing Needs. Through the Continuum of Care and Solano Safety Net Consortium – Community Action Agency (SSNC-CAA), the County will continue to cooperate and work with other governmental and non-governmental organizations to encourage, promote, and facilitate the provision of emergency shelters, transitional housing, and housing to meet other special housing needs. The SSNC-CAA receives funding from CDBG, HUD, FESG, EHAP, United Way and other sources. Funds are used to provide housing assistance (in the form of rental assistance), hotel vouchers, tenant rights assistance, credit clean-up, budget sessions, job developing, etc. These services are in place to keep housing clients in their homes.</p> <p>Through the collaborative efforts of the Continuum of Care (CofC), the County will continue to assess the magnitude of the homeless problem and to coordinate and promote housing assistance programs for the homeless. The County will promote the use of community facilities and continue to work with service agencies to provide short-term emergency housing for the homeless (rotating church space, hotel/ motel vouchers, armories, public spaces, emergency shelters for natural disasters and special need shelters such as battered women's shelters, sober housing, etc.). The County will continue to encourage and work with and assist non-profit housing development corporations to promote, assist or sponsor housing for the homeless. The County will also explore the feasibility of using its Community Development Block Grants (CDBG) to provide seed money to assist non-profit agencies in these efforts. Through its Zoning Code, the County will continue to provide opportunities for sites to accommodate emergency shelters and transitional housing in all of its residential zoning districts through the use permit process and to accommodate farmworker housing in the Agricultural zoning districts.</p> <p>Responsibility: Resource Management, Health and Social Services, Continuum of Care and Solano Safety Net Consortium – Community Action Agency Target Date: Ongoing Funding Source: General Fund, HUD, FESG, EHAP, CDBG, United Way</p>	<p>Ongoing</p> <p>This program will be modified to integrate Program D.1 and to specifically address those with developmental disabilities.</p>	<p>Modify to integrate Program D.1 and to specifically address those with developmental disabilities.</p>
<p>D.5 Housing Assistance Outreach – Special Housing Needs. Consistent with State law, the County has identified sites that can accommodate development of new farm worker housing, new emergency shelters and new transitional housing. The County will continue to provide opportunities for development of facilities for emergency and transition housing ("community care facilities" with seven or more persons) in all of its residential</p>	<p>The County has continued to implement the ongoing components of this program. A program to address the requirements of Health and</p>	<p>Modify to remove the requirements to amend zoning and continue.</p>

Appendix B: Review of Previous Housing Element

"Planning for a Sustainable Solano County"

Housing Program	Accomplishments	Continue, Modify, or Delete Program
<p>zoning districts through the use permit process. The County will continue to provide for development of farm worker housing in its Agricultural zoning districts. In addition to the primary residence on parcels under Agricultural zoning, the County provides for a "secondary dwelling unit" as an allowed use by right for either farm worker or non-farm worker housing. For additional housing above the two units allowed by right, the County's agricultural zoning districts also includes provisions for temporary manufactured dwelling units for agricultural employee housing through the use permit process. The zoning code has been amended to allow farmworker housing permitted by the State Department of Housing and Community (HCD) development by right without a use permit.</p> <p>The County has reviewed the Health and Safety Code Section 17021.5 and the County's zoning is consistent with these provisions. Within the Agricultural zoning districts, two residential units are allowed by right as either farm worker or non-farm worker housing with no use permits required. Beyond these two units, no additional residential units are allowed within the Agricultural zoning districts except for farm worker employee housing through the use permit process. As a result of providing additional residential allowances specifically for farmworker housing, the uses permitted in the zoning ordinance go above and beyond requirements under the Employee Housing Act. To address group quarters under Health and Safety Code Section 17021.6, the County will continue to allow Group Quarters as an allowed use when a HCD permit is obtained.</p> <p>In addition, the County will notify the public of available special housing needs and emergency shelter assistance programs and equal housing opportunity programs in coordination with the CofC and SSNC-CAA, city housing authorities, redevelopment agencies and other public and private agencies. The County will develop an informational brochure explaining options, permitting process and possible funding sources for the development of farmworker housing.</p> <p>Through the Solano County Housing Authority contract with the City of Vacaville Housing Authority, the County will continue to provide fair housing services in the unincorporated area. In coordination with the City of Vacaville Housing Authority, the County will continue to assist the public in matters concerning fair housing issues and referrals to appropriate investigative and enforcement agencies. The County will promote equal housing opportunities through the distribution and posting of fair housing information in coordination with other agencies at public building and facilities and other locations throughout the entire County. Through the Housing Counseling program, the County will continue to promote fair housing education through Fair Housing Workshops, Landlord Training and Tenant Credit Repair Workshops and Tenants' rights Clinics at various locations throughout the County.</p>	<p>Safety Code Section 17021.6 will be included in the updated Housing Element.</p>	

A p p e n d i x B : R e v i e w o f P r e v i o u s H o u s i n g E l e m e n t

Housing Program	Accomplishments	Continue, Modify, or Delete Program
Responsibility: Resource Management, Vacaville Housing Authority, Redevelopment Agencies Target Date: Develop an informational brochure explaining options, permitting process and possible funding sources for the development of farmworker housing by June 2011. Funding Source: General Fund, Continuum of Care, Solano Safety Net Consortium – Vacaville Housing Authority		
D.6 Extremely Low-Income Households – Special Needs Housing. Assembly Bill 2634 requires the quantification and analysis of existing and projected housing needs of extremely low-income households and requires Housing Elements to identify zoning to encourage and facilitate supportive housing and single-room occupancy units (SROs). Currently, the County does not explicitly define SROs in the Zoning Code, but defines "rooming or boarding house" in the Zoning Code as "A dwelling, other than a hotel, where lodging or meals, or both, for four or more persons are provided for compensation." The County's Zoning Code currently permits rooming or boarding houses in the R-M and R-E zones. The County will amend the Zoning Code to include SROs under the definition of "rooming and boarding houses" and allow them in the same zones as "rooming and boarding houses". In addition, to support the development of single room occupancy units or other types of housing affordable to extremely low-income households, the County will prioritize and leverage federal and state funding for the development of these units. The County is projecting to assist with the construction of approximately 2 units. Responsibility: Resource Management Target Date: Amend the Zoning Code to define single-room occupancy units by February 2011. Funding Source: General Fund, state and federal programs	The County is currently processing amendments to allow SROs. The amendments will be completed prior to or at the same time as Housing Element adoption.	Modify to remove the requirements to amend zoning and continue.
D.7 Child Care – Special Needs Housing. In cooperation with private developers, the County will evaluate the feasibility of pairing child care centers with new multifamily developments on a case by case basis. Responsibility: Resource Management Target Date: Ongoing Funding Source: General Fund	This program is ongoing. No multifamily developments have occurred. This program does not make sense for the County at this time as most higher density housing is focused in the incorporated areas of the county. This program will not be continued.	Delete.

Appendix B: Review of Previous Housing Element

Housing Program	Accomplishments	Continue, Modify, or Delete Program
E. Governmental and Non-Governmental Constraints		
<p>E.1 Reasonable Accommodation Ordinance for Persons with Disabilities. The County currently evaluates the need for reasonable accommodations on a case by case basis and is enforced through the building permit process. Any building permit applications involving employers require that the site, facility, and all buildings comply with accessibility standards. The Building Division is mandated to enforce the most restrictive of either ADA or the California Accessibility Standards. The County will develop a more formalized reasonable accommodation procedure that will provide an administrative exception process in zoning and land use matters for housing for persons with disabilities, as required by State law (SB 520).</p> <p>Responsibility: Resource Management Target Date: February 2011 Funding Source: General Fund</p>	<p>The County has not developed a locally specific ordinance, but continues to adhere strictly to the requirements of the ADA and the California Accessibility Standards for all development and land uses that require such compliance. Further, for any and all rehabilitation projects that are funded in part by HUD grant funds, those funds will be utilized for qualifying upgrades or work needed to meet the needs of disabled persons.</p>	Continue.
<p>E.2 Parking Requirements. The County will consider revising its parking standards to include a sliding scale based on bedroom type (i.e. studio and 1-bedroom). In addition, the County will annually review its parking requirements to ensure they do not constrain the development of affordable housing.</p> <p>Responsibility: Resource Management Target Date: February 2012 Funding Source: General Fund</p>	<p>The County has not reviewed its parking requirements, as parking issues are rarely a demonstrated concern for residents. Affordable housing is more constrained by the lack of city services, not parking requirements. The County has added flexibility in its code to allow the Zoning Administrator to adjust parking requirements based on site-specific constraints and conditions.</p>	Modify to reflect the revision for more flexibility and continue.
F. Housing Location, Density, and Timing		
<p>F.1 General Plan Conformity. The General Plan will be the primary tool to guide the location, density and timing for residential development. The County shall review residential projects for conformity with General Plan policies, particularly those pertinent to housing, land use, and public services.</p> <p>Responsibility: Resource Management Target Date: Ongoing, 2009-2014 Funding Source: General Fund</p>	<p>This program is implemented as needed on an ongoing basis. No significant residential projects have been processed.</p> <p>Conformity with the General Plan is implemented as a matter of normal County procedures. This program will not be continued.</p>	Delete.

Appendix B: Review of Previous Housing Element

Housing Program	Accomplishments	Continue, Modify, or Delete Program
<p>F.2 Housing Element Consistency. The County will review General Plan amendments and development proposals for conformity with Housing Element policies.</p> <p>Responsibility: Resource Management Target Date: Ongoing, 2009-2014 Funding Source: General Fund</p>	This program is implemented on an ongoing basis. General Plan and Housing Element consistency is implemented as a matter of normal County procedures. This program will not be continued.	Delete.
G. Public Facilities and Services		
<p>G.1 Capital Improvements. The County shall continue ongoing implementation of capital improvements including drainage, waterline and roadway improvements in the Homeacres community</p> <p>Responsibility: Resource Management Target Date: Ongoing Funding Source: Vallejo Redevelopment Agency</p>	This program has been implemented on an ongoing basis.	Modify to remove reference to the Vallejo Redevelopment Agency and continue.
<p>G.2 School Impact Mitigation Fee Collection. The County shall continue to assist the school districts in mitigating the impacts of new development on school facility requirements by cooperating to collect legally authorized school impact fees on behalf of districts from new residential and non-residential development projects processed by the County.</p> <p>Responsibility: Resource Management, School Districts Target Date: Ongoing, through building permits. Funding Source: Impact Fees</p>	This program has been implemented on an ongoing basis. Collection of school fees is implemented as a matter of normal County procedures. This program will not be continued.	Delete.

Appendix B: Review of Previous Housing Element

Housing Program	Accomplishments	Continue, Modify, or Delete Program
H. Environmental Quality		
<p>H.1 Blight Removal. The County will apply for Neighborhood Stabilization Program (NSP) funding to be earmarked for foreclosed homes and to allow first time home buyers access to these homes at a reduced cost. The County will continue to utilize HOME funds to upgrade dilapidated housing for qualified homeowners, thus helping to eliminate future potential blight concerns.</p> <p>Responsibility: Resource Management Target Date: Apply for NSP funds by June 2010 and continue to apply for HOME or CDBG funds annually. Funding Source: General Fund</p>	<p>Neighborhood Stabilization Program 3 funds were granted to the County and a program was administered in cooperation with the City of Fairfield. The NSP3 program has been closed out, after assisting four homes in the unincorporated county. Some program income remains. HOME funds were used during the previous Housing Element planning period for housing rehabilitation and first time homebuyer programs. The County does not currently have an open HOME program.</p>	Modify to delete the NSP and continue.
<p>H.2 Hazard Abatement. The County will continue to enforce health ordinances, and weed, fire and inoperative automobile abatement ordinances.</p> <p>Responsibility: Resource Management Target Date: Ongoing as projects are processed through the Resource Management Department, 2009-2014. Funding Source: General Fund</p>	<p>This program is implemented on an ongoing basis. Enforcement of these ordinances is a matter of normal County procedures. This program will not be continued.</p>	Delete.
<p>H.3 Architectural Review. The County will continue to implement architectural review to ensure future development within rural communities is harmonious with existing development.</p> <p>Responsibility: Resource Management Target Date: Ongoing as projects are processed through the Resource Management Department, 2009-2014. Funding Source: General Fund</p>	<p>This program is implemented on an ongoing basis as projects requiring architectural review are submitted.</p>	Continue.

A p p e n d i x B : R e v i e w o f P r e v i o u s H o u s i n g E l e m e n t

Housing Program	Accomplishments	Continue, Modify, or Delete Program
<p>H.4 General Plan Conformity. The County will review residential projects for conformity with General Plan policies.</p> <p>Responsibility: Resource Management</p> <p>Target Date: Ongoing as projects are processed through the Resource Management Department, 2009-2014.</p> <p>Funding Source: General Fund</p>	<p>This program is implemented as needed on an ongoing basis. Conformity with the General Plan is implemented as a matter of normal County procedures. This program will not be continued.</p>	Delete.
I. Energy Conservation		
<p>I.1 Energy Conservation Outreach. The County will continue to have representation on the Green Building Committee, made up of Building Officials, the Building Standards Commission, the CEC, and the CA Building Officials Association. The committee will be doing public outreach by explaining to local agency building officials, staff, developers, contractors, architects, and engineers the Green Building program and greenhouse gas reduction program.</p> <p>Responsibility: Resource Management</p> <p>Target Date: Quarterly public outreach efforts.</p> <p>Funding Source: General Fund</p>	<p>Regular outreach efforts have included providing information to developers, contractors, and the general public. County Resource Management staff also provides information relating to the County's Climate Action Plan to County General Services staff for the development of public facilities. Waste management, recycling programs, and green business programs are also well publicized.</p>	Continue.
<p>I.2 Standards and Guidelines for Energy Efficiency and Conservation. The County will ensure that all new residential construction meets or exceeds the State Title 24 standards for energy efficiency. The County will continue to implement provisions of the California Solar Rights Act of 1978 and the State Solar Shade Control Act through the County's subdivision ordinance to assure that solar access is protected in major and minor subdivisions in residentially zoned areas. The County will provide staff assistance with site planning, landscaping and vegetation plantings for new residential units.</p> <p>Responsibility: Resource Management</p> <p>Target Date: Ongoing</p> <p>Funding Source: General Fund</p>	<p>This program is implemented on an ongoing basis. All new construction in the County must meet Title 24. Exceeding Title 24 is voluntary. There have been no notable projects other than ongoing residential solar installation.</p>	Continue.

Appendix B: Review of Previous Housing Element

Housing Program	Accomplishments	Continue, Modify, or Delete Program
<p>I.3 Energy Conservation Assistance Programs. The County will partner with PG&E to promote energy saving programs such as, the California Alternate Rates for Energy (CARE), the Relief for Energy Assistance through Community Help (REACH) and the Family Electric Rate Assistance (FERA). In addition, the County will work with PG&E to encourage existing residents to participate in energy efficiency retrofit programs.</p> <p>Responsibility: Resource Management</p> <p>Target Date: Ongoing, as projects are processed through the Resource Management Department.</p> <p>Funding Source: General Fund</p>	<p>Implementation of this program is ongoing. The County is partnering with PG&E on the Energy Watch Program, which is solely for municipalities and agencies. The County's contract with PG&E is currently being finalized. The County is also cooperating with local cities on the Rising Sun program which will provide residents with no-cost energy and water conservation services.</p>	<p>Modify to incorporate updates to the programs and continue.</p>

Appendix

C LAND INVENTORY TABLE AND MAP

APN	Zone	General Plan Land Use	Acreage	Maximim Allowed Density (Units Per Acre)	Current Capacity	Max Unit Capacity If Subdivided
0048050100	AG-160	AG	160.22	0.01	1	1
0090190190	AG-160	AG	247.82	0.01	1	2
0090180270	AG-160	AG	289.50	0.01	1	2
0048100250	AG-160	AG	321.10	0.01	1	2
0048050070	AG-160	AG	320.85	0.01	1	2
0048050110	AG-160	AG	163.32	0.01	1	1
0090090080	AG-160	AG	314.26	0.01	1	2
0048050230	AG-160	AG	161.66	0.01	1	1
0048070170	AG-160	AG	191.60	0.01	1	1
0048010440	AG-160	AG	164.52	0.01	1	1
0048050040	AG-160	AG	160.01	0.01	1	1
0048010290	AG-160	AG	162.96	0.01	1	1
Total AG-160					12	17
0102230150	AG-20	AG	21.10	0.05	1	1
0180360050	AG-20	AG	100.68	0.05	1	5
0167190280	AG-20	AG	20.06	0.05	1	1
0102090070	AG-20	AG	39.38	0.05	1	1
0082010030	AG-20	AG	85.88	0.05	1	4
0105170150	AG-20	AG/SP - Pippo Ranch	260.69	0.05	1	13
0180050020	AG-20	AG	167.72	0.05	1	8
0181250050	AG-20	AG	41.70	0.05	1	2
0104040270	AG-20	AG	22.71	0.05	1	1
0181240040	AG-20	AG	744.51	0.05	1	37
0153160130	AG-20	AG	25.60	0.05	1	1
0101060100	AG-20	AG	23.28	0.05	1	1
0102080020	AG-20	AG	94.56	0.05	1	4
0105090130	AG-20	RR	20.80	0.05	1	1
0181260080	AG-20	AG	506.84	0.05	1	25
0166030030	AG-20	AG	87.58	0.05	1	4
0181220080	AG-20	AG	93.19	0.05	1	4
0104040250	AG-20	AG	20.28	0.05	1	1
0105070470	AG-20	AG	25.88	0.05	1	1
0104090020	AG-20	AG	258.54	0.05	1	12
0105040350	AG-20	AG	26.78	0.05	1	1
0166030040	AG-20	AG	33.76	0.05	1	1
0167190140	AG-20	AG	106.95	0.05	1	5
0104110120	AG-20	AG	20.77	0.05	1	1
0102030300	AG-20	AG	76.83	0.05	1	3
0104040110	AG-20	AG	100.72	0.05	1	5
0104040390	AG-20	AG	42.51	0.05	1	2
0102090140	AG-20	AG	82.75	0.05	1	4
0181250080	AG-20	AG	25.69	0.05	1	1
0181160030	AG-20	AG	36.46	0.05	1	1
0181170060	AG-20	AG	44.99	0.05	1	2
0153160090	AG-20	AG	20.33	0.05	1	1
0105090090	AG-20	RR	40.05	0.05	1	2
0105040360	AG-20	AG	27.19	0.05	1	1
0126030040	AG-20	AG	99.68	0.05	1	4
0104020120	AG-20	AG	21.81	0.05	1	1
0106090430	AG-20	SP - North Vacaville Limited Industrial	40.37	0.05	1	2
0105160170	AG-20	AG	80.93	0.05	1	4
0101060080	AG-20	PR/AG	26.99	0.05	1	1
0126010160	AG-20	AG	40.04	0.05	1	2
0167190270	AG-20	AG	477.69	0.05	1	23
0181200010	AG-20	AG	552.35	0.05	1	27
0167080170	AG-20	AG	36.50	0.05	1	1
0101090220	AG-20	AG	21.21	0.05	1	1
0166060150	AG-20	UI	174.40	0.05	1	8

APN	Zone	General Plan Land Use	Acreage	Maximim Allowed Density (Units Per Acre)	Current Capacity	Max Unit Capacity If Subdivided
0148010150	AG-20	AG	20.14	0.05	1	1
0102190030	AG-20	AG	26.21	0.05	1	1
0126040010	AG-20	AG	29.72	0.05	1	1
0180050030	AG-20	AG	109.58	0.05	1	5
0181270010	AG-20	AG	244.92	0.05	1	12
0104020180	AG-20	AG	25.29	0.05	1	1
0148260080	AG-20	UC-HC	22.83	0.05	1	1
0153160120	AG-20	AG	22.71	0.05	1	1
0102030060	AG-20	AG	117.36	0.05	1	5
0181160050	AG-20	AG	20.89	0.05	1	1
0104020170	AG-20	AG	25.64	0.05	1	1
0104110090	AG-20	AG	41.46	0.05	1	2
0104030100	AG-20	AG	169.39	0.05	1	8
0166020140	AG-20	AG	217.25	0.05	1	10
0148180010	AG-20	SP - Middle Green Valley	164.26	0.05	1	8
0105040750	AG-20	AG	20.13	0.05	1	1
0181250090	AG-20	AG	20.27	0.05	1	1
0101150170	AG-20	WS	411.87	0.05	1	20
0104040370	AG-20	AG	53.83	0.05	1	2
0181200030	AG-20	AG	231.00	0.05	1	11
0166050020	AG-20	UI	191.16	0.05	1	9
0104040120	AG-20	AG	23.03	0.05	1	1
0181250040	AG-20	AG	41.28	0.05	1	2
0181150170	AG-20	AG	21.03	0.05	1	1
0181240050	AG-20	AG	118.31	0.05	1	5
0105010500	AG-20	WS	21.41	0.05	1	1
0148040020	AG-20	AG	363.74	0.05	1	18
0151040010	AG-20	WS	223.32	0.05	1	11
0105190140	AG-20	AG	35.60	0.05	1	1
0101090260	AG-20	AG	20.80	0.05	1	1
0181150140	AG-20	AG	20.26	0.05	1	1
0166010120	AG-20	AG	127.71	0.05	1	6
0101090700	AG-20	AG	21.58	0.05	1	1
0181210020	AG-20	AG	91.27	0.05	1	4
0103090140	AG-20	AG	59.31	0.05	1	2
0101090090	AG-20	AG	48.72	0.05	1	2
0126010150	AG-20	AG	33.17	0.05	1	1
0105100090	AG-20	AG	28.93	0.05	1	1
0102090080	AG-20	AG	38.89	0.05	1	1
0151060010	AG-20	AG	31.29	0.05	1	1
0174160250	AG-20	AG	34.79	0.05	1	1
0166020030	AG-20	AG	136.93	0.05	1	6
0122120080	AG-20	AG	22.90	0.05	1	1
0149090040	AG-20	WS	20.66	0.05	1	1
0153160110	AG-20	AG	26.51	0.05	1	1
0105090150	AG-20	RR	20.34	0.05	1	1
0105200470	AG-20	RR	25.22	0.05	1	1
0180360030	AG-20	AG	30.59	0.05	1	1
0166030010	AG-20	AG	24.95	0.05	1	1
0166060070	AG-20	AG	22.99	0.05	1	1
0104150010	AG-20	WS	62.34	0.05	1	3
0181170070	AG-20	AG	38.85	0.05	1	1
0105070440	AG-20	AG	27.66	0.05	1	1
0181270060	AG-20	AG	140.67	0.05	1	7
0102140270	AG-20	AG	79.89	0.05	1	3
0166060060	AG-20	AG	76.72	0.05	1	3
0104020060	AG-20	AG	153.48	0.05	1	7

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0104040140	AG-20	AG	24.71	0.05	1	1
0148040030	AG-20	SP - Middle Green Valley	88.07	0.05	1	4
0101150160	AG-20	WS	335.82	0.05	1	16
0166120870	AG-20	AG	30.88	0.05	1	1
0105190030	AG-20	AG	54.31	0.05	1	2
0102230120	AG-20	AG	21.66	0.05	1	1
0167080050	AG-20	AG	53.90	0.05	1	2
0174010080	AG-20	USP-Fairfield Train Station Specific Plan	22.75	0.05	1	1
0180060030	AG-20	AG	20.03	0.05	1	1
Total AG-20					111	463
0104080110	AG-40	AG	115.56	0.03	1	2
0137050090	AG-40	UR-L	75.28	0.03	1	1
0166040090	AG-40	AG	98.79	0.03	1	2
0137060010	AG-40	AG	147.22	0.03	1	3
0110060230	AG-40	AG	67.96	0.03	1	1
0108100010	AG-40	AG	77.92	0.03	1	1
0142120030	AG-40	AG	135.31	0.03	1	3
0109110020	AG-40	AG	47.66	0.03	1	1
0110070050	AG-40	AG	41.63	0.03	1	1
0142200030	AG-40	AG	152.48	0.03	1	3
0123100160	AG-40	AG	40.17	0.03	1	1
0110010030	AG-40	AG	84.41	0.03	1	2
0109100050	AG-40	AG	58.44	0.03	1	1
0166040020	AG-40	AG	94.62	0.03	1	2
0109040030	AG-40	AG	94.65	0.03	1	2
0138030100	AG-40	UR-L/PR/AG	52.47	0.03	1	1
0110080060	AG-40	AG	44.95	0.03	1	1
0135070040	AG-40	AG	61.98	0.03	1	1
0108040010	AG-40	AG	87.97	0.03	1	2
0137060020	AG-40	AG	148.00	0.03	1	3
0110080040	AG-40	AG	44.12	0.03	1	1
0110080070	AG-40	AG	40.66	0.03	1	1
0166040010	AG-40	AG	135.18	0.03	1	3
0109020060	AG-40	AG	75.93	0.03	1	1
0133110020	AG-40	AG	146.76	0.03	1	3
0142170010	AG-40	AG	159.03	0.03	1	3
0137030140	AG-40	UR-L	44.92	0.03	1	1
0111070400	AG-40	AG	40.01	0.03	1	1
0142130090	AG-40	AG	50.82	0.03	1	1
0142220110	AG-40	AG	53.78	0.03	1	1
0111010020	AG-40	AG	73.49	0.03	1	1
0109060030	AG-40	AG	101.25	0.03	1	2
0115030110	AG-40	UR-L	136.88	0.03	1	3
0166040030	AG-40	AG	73.37	0.03	1	1
0108020020	AG-40	AG	152.75	0.03	1	3
0137050120	AG-40	UR-L	51.26	0.03	1	1
0137050070	AG-40	AG	44.82	0.03	1	1
0142210040	AG-40	AG	75.84	0.03	1	1
0109270100	AG-40	AG	134.13	0.03	1	3
0106160010	AG-40	AG	305.44	0.03	1	7
0138090090	AG-40	UR-L/PR/AG	64.61	0.03	1	1
0110020070	AG-40	AG	199.35	0.03	1	4
0109050020	AG-40	AG	40.81	0.03	1	1
Total AG-40					43	79
0166050100	AG-80	AG	152.56	0.01	1	1
0166040060	AG-80	AG	142.68	0.01	1	1
Total AG-80					2	2
0044240050	ASV-20	USP-Nelson Hill Master Plan	71.97	0.05	1	3

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0149100010	ASV-20	AG	77.58	0.05	1	3
0044250220	ASV-20	AG	88.07	0.05	1	4
0027251490	ASV-20	AG	4.16	0.05	1	1
0044250170	ASV-20	AG	48.70	0.05	1	2
0027040090	ASV-20	AG	9.65	0.05	1	1
0027510360	ASV-20	AG	5.29	0.05	1	1
0149090150	ASV-20	AG	6.96	0.05	1	1
0044230030	ASV-20	USP-Nelson Hill Master Plan	157.68	0.05	1	7
0046300010	ASV-20	AG	51.43	0.05	1	2
0151150010	ASV-20	AG	56.80	0.05	1	2
0149090200	ASV-20	AG	15.38	0.05	1	1
0027251310	ASV-20	AG	59.11	0.05	1	2
0149070090	ASV-20	AG	10.75	0.05	1	1
Total ASV-20					14	31
0105050540	RR-2.5	RR	5.04	0.40	1	2
0106140080	RR-2.5	RR	1.36	0.40	1	1
0105080090	RR-2.5	RR	10.09	0.40	1	4
0106110010	RR-2.5	RR	9.10	0.40	1	3
0038160160	RR-2.5	RR	2.37	0.40	1	1
0106140100	RR-2.5	RR	0.57	0.40	1	1
0123060060	RR-2.5	RR	42.99	0.40	1	17
0129032010	RR-2.5	UR-L	0.65	0.40	1	1
0106090180	RR-2.5	RR	3.44	0.40	1	1
0105240150	RR-2.5	RR	4.08	0.40	1	1
0105200190	RR-2.5	RR	12.34	0.40	1	4
0105200060	RR-2.5	RR	10.75	0.40	1	4
0123070250	RR-2.5	RR	16.54	0.40	1	6
0129032050	RR-2.5	UR-L	0.12	0.40	1	1
0133150070	RR-2.5	RR	4.96	0.40	1	1
0106200020	RR-2.5	RR	0.18	0.40	1	1
0105110600	RR-2.5	RR	28.93	0.40	1	11
0147060070	RR-2.5	RR	1.14	0.40	1	1
0025200140	RR-2.5	SP - Middle Green Valley	1.85	0.40	1	1
0133050080	RR-2.5	UR-RR	1.00	0.40	1	1
0105240110	RR-2.5	RR	2.14	0.40	1	1
0105250040	RR-2.5	RR	2.15	0.40	1	1
0134250220	RR-2.5	UR-L	2.54	0.40	1	1
0153060060	RR-2.5	RR	256.10	0.40	1	102
0123210120	RR-2.5	RR	0.10	0.40	1	1
0153060070	RR-2.5	RR	61.44	0.40	1	24
0106051080	RR-2.5	RR	4.72	0.40	1	1
0123450020	RR-2.5	RR	5.81	0.40	1	2
0105200180	RR-2.5	RR	0.43	0.40	1	1
0148135010	RR-2.5	SP - Middle Green Valley	0.54	0.40	1	1
0123030350	RR-2.5	RR	2.87	0.40	1	1
0134250240	RR-2.5	UR-L	4.86	0.40	1	1
0133140010	RR-2.5	RR	1.81	0.40	1	1
01062220310	RR-2.5	RR	4.91	0.40	1	1
0123450120	RR-2.5	RR	3.13	0.40	1	1
0106120190	RR-2.5	RR	1.56	0.40	1	1
0105080480	RR-2.5	RR	3.16	0.40	1	1
0037160040	RR-2.5	UR-M	1.28	0.40	1	1
0123030520	RR-2.5	RR	2.17	0.40	1	1
0106080300	RR-2.5	RR	1.95	0.40	1	1
0148131040	RR-2.5	TC-R	0.08	0.40	1	1
0133160180	RR-2.5	RR	2.94	0.40	1	1
0044080120	RR-2.5	TC-R	0.92	0.40	1	1
0105110630	RR-2.5	RR	32.23	0.40	1	12

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0109160060	RR-2.5	RR	4.94	0.40	1	1
0133160120	RR-2.5	RR	3.93	0.40	1	1
0147060030	RR-2.5	RR	0.24	0.40	1	1
0038020100	RR-2.5	RR	0.73	0.40	1	1
0105240130	RR-2.5	RR	5.66	0.40	1	2
0153040030	RR-2.5	RR	0.20	0.40	1	1
0105010460	RR-2.5	RR	6.07	0.40	1	2
0109070170	RR-2.5	RR	4.19	0.40	1	1
0106120070	RR-2.5	RR	2.15	0.40	1	1
0133170110	RR-2.5	RR	0.55	0.40	1	1
0148100140	RR-2.5	TC-R	2.52	0.40	1	1
0105060070	RR-2.5	RR	2.37	0.40	1	1
0105030460	RR-2.5	RR	1.39	0.40	1	1
0025180330	RR-2.5	RR	2.23	0.40	1	1
0044050290	RR-2.5	TC-R	1.55	0.40	1	1
0134250200	RR-2.5	UR-L	4.91	0.40	1	1
0038170180	RR-2.5	RR	1.02	0.40	1	1
0105240060	RR-2.5	RR	2.47	0.40	1	1
0153050060	RR-2.5	RR	2.54	0.40	1	1
0105020110	RR-2.5	RR	15.34	0.40	1	6
0109170210	RR-2.5	RR	5.11	0.40	1	2
0103040040	RR-2.5	RR	8.35	0.40	1	3
0105030530	RR-2.5	RR	5.21	0.40	1	2
0123070370	RR-2.5	RR	0.12	0.40	1	1
0105200200	RR-2.5	RR	50.62	0.40	1	20
0105240120	RR-2.5	RR	2.60	0.40	1	1
0133012170	RR-2.5	UR-RR	5.14	0.40	1	2
0134250070	RR-2.5	RR	4.93	0.40	1	1
0105020710	RR-2.5	RR	2.40	0.40	1	1
0106150130	RR-2.5	RR	4.77	0.40	1	1
0105030120	RR-2.5	RR	5.82	0.40	1	2
0038060250	RR-2.5	RR	2.44	0.40	1	1
0105030060	RR-2.5	RR	5.92	0.40	1	2
0044050210	RR-2.5	TC-R	0.13	0.40	1	1
0153260010	RR-2.5	RR	15.66	0.40	1	6
0103010070	RR-2.5	RR	0.27	0.40	1	1
0106170320	RR-2.5	RR	2.57	0.40	1	1
0105060580	RR-2.5	RR	2.56	0.40	1	1
0129020080	RR-2.5	UR-L	3.49	0.40	1	1
0129032070	RR-2.5	UR-L	0.71	0.40	1	1
0123030160	RR-2.5	RR	2.02	0.40	1	1
0123030170	RR-2.5	RR	2.40	0.40	1	1
0106051050	RR-2.5	RR	5.14	0.40	1	2
0123450080	RR-2.5	RR	2.42	0.40	1	1
0134250210	RR-2.5	UR-L	2.35	0.40	1	1
0106150440	RR-2.5	RR	4.73	0.40	1	1
0106080310	RR-2.5	RR	1.55	0.40	1	1
0134250140	RR-2.5	RR	4.90	0.40	1	1
0123030330	RR-2.5	RR	4.60	0.40	1	1
0147060110	RR-2.5	RR	2.40	0.40	1	1
0105020670	RR-2.5	RR	10.18	0.40	1	4
0105110580	RR-2.5	RR	5.68	0.40	1	2
0105080470	RR-2.5	RR	40.41	0.40	1	16
0025180310	RR-2.5	RR	2.07	0.40	1	1
0109160020	RR-2.5	RR	9.58	0.40	1	3
0153250150	RR-2.5	RR	0.44	0.40	1	1
0123030230	RR-2.5	RR	1.48	0.40	1	1

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0123173040	RR-2.5	RR	3.36	0.40	1	1
0105030130	RR-2.5	RR	5.95	0.40	1	2
0106070310	RR-2.5	RR	2.55	0.40	1	1
0105200120	RR-2.5	RR	9.87	0.40	1	3
0106120160	RR-2.5	RR	1.55	0.40	1	1
0123171030	RR-2.5	RR	2.33	0.40	1	1
0105140170	RR-2.5	RR	4.90	0.40	1	1
0025190260	RR-2.5	SP - Middle Green Valley	0.26	0.40	1	1
0123060680	RR-2.5	RR	2.46	0.40	1	1
0105030090	RR-2.5	RR	5.19	0.40	1	2
0105240160	RR-2.5	AG	3.47	0.40	1	1
0038060230	RR-2.5	RR	2.45	0.40	1	1
0105080190	RR-2.5	RR	20.24	0.40	1	8
0103040110	RR-2.5	RR	0.84	0.40	1	1
0103020020	RR-2.5	RR	36.69	0.40	1	14
0106110060	RR-2.5	RR	4.72	0.40	1	1
0147182160	RR-2.5	RR	0.53	0.40	1	1
0106120140	RR-2.5	RR	4.16	0.40	1	1
0123070090	RR-2.5	RR	0.56	0.40	1	1
0123120160	RR-2.5	RR	2.40	0.40	1	1
0133160010	RR-2.5	RR	0.26	0.40	1	1
0106130180	RR-2.5	RR	4.86	0.40	1	1
0105190100	RR-2.5	RR	5.93	0.40	1	2
0123070160	RR-2.5	RR	6.01	0.40	1	2
0044050300	RR-2.5	TC-R	0.18	0.40	1	1
0106220130	RR-2.5	RR	3.43	0.40	1	1
0147060040	RR-2.5	RR	0.35	0.40	1	1
0105110590	RR-2.5	RR	20.88	0.40	1	8
0105030550	RR-2.5	RR	5.66	0.40	1	2
0106070320	RR-2.5	RR	7.91	0.40	1	3
0106140160	RR-2.5	RR	3.66	0.40	1	1
0129032030	RR-2.5	UR-L	0.33	0.40	1	1
0123030360	RR-2.5	RR	4.71	0.40	1	1
0129080020	RR-2.5	UR-L	4.76	0.40	1	1
0129080006	RR-2.5	UR-L	3.86	0.40	1	1
0123070350	RR-2.5	RR	0.17	0.40	1	1
Total RR-2.5					137	412
0121191140	RR-5	RR	0.13	0.20	1	1
0105220120	RR-5	RR	0.58	0.20	1	1
0105170220	RR-5	RR	4.84	0.20	1	1
0123020200	RR-5	RR	0.50	0.20	1	1
0121201050	RR-5	RR	6.87	0.20	1	1
0105170200	RR-5	RR	4.53	0.20	1	1
0105210410	RR-5	RR	4.71	0.20	1	1
0105030410	RR-5	RR	5.00	0.20	1	1
0105050030	RR-5	RR	0.34	0.20	1	1
0123030580	RR-5	RR	9.80	0.20	1	1
0121191160	RR-5	RR	0.36	0.20	1	1
0123010330	RR-5	RR	0.03	0.20	1	1
0106290260	RR-5	RR	4.76	0.20	1	1
0121201170	RR-5	RR	0.01	0.20	1	1
0102221050	RR-5	RR	6.75	0.20	1	1
0104120240	RR-5	RR	0.62	0.20	1	1
0103020210	RR-5	RR	5.56	0.20	1	1
0123160180	RR-5	RR	0.82	0.20	1	1
0103020320	RR-5	RR	4.85	0.20	1	1
0121201290	RR-5	RR	6.28	0.20	1	1
0123060430	RR-5	RR	13.26	0.20	1	2

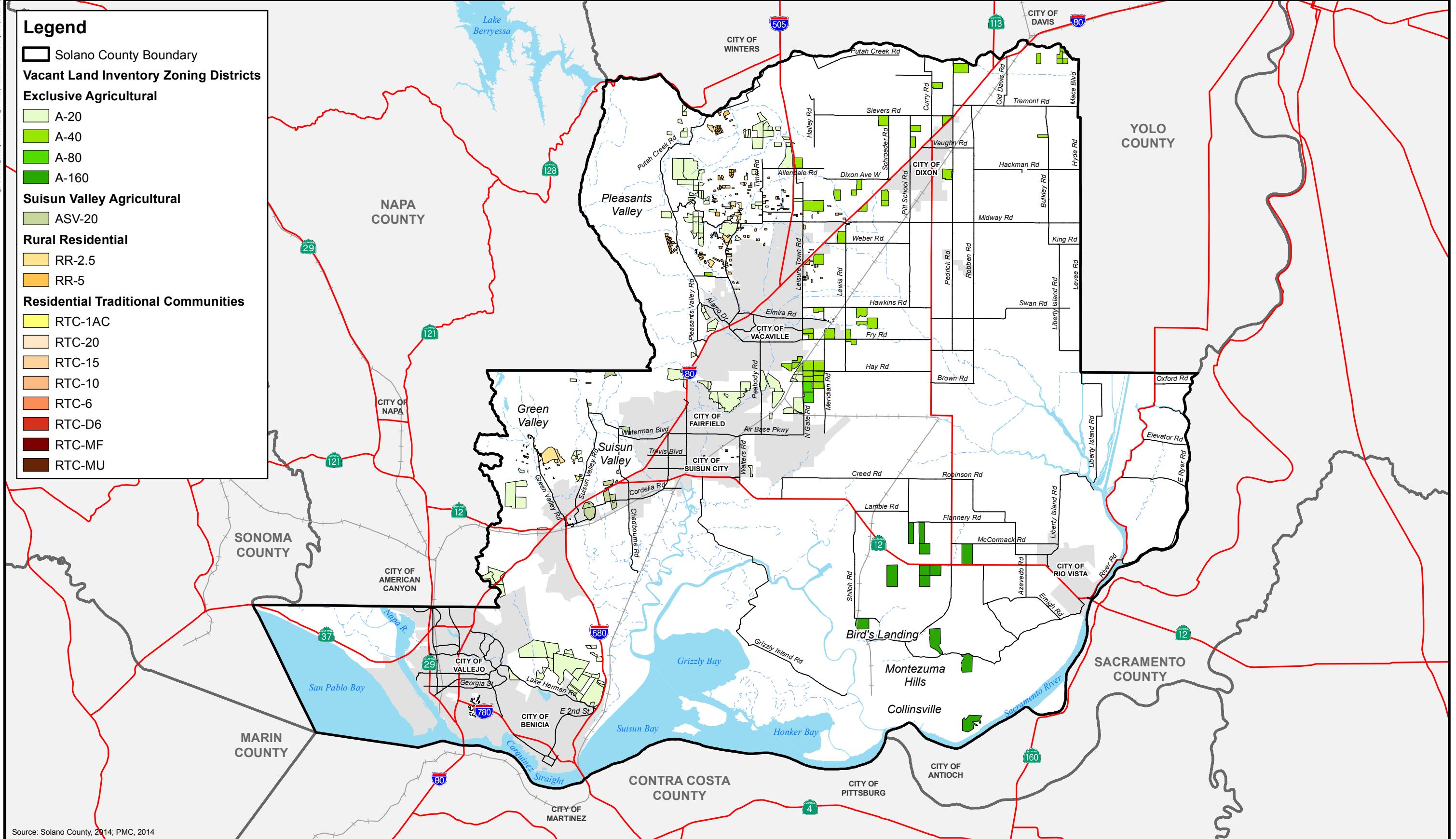
APN	Zone	General Plan Land Use	Acreage	Maximim Allowed Density (Units Per Acre)	Current Capacity	Max Unit Capacity If Subdivided
0025120350	RR-5	RR	5.25	0.20	1	1
0104120900	RR-5	RR	4.83	0.20	1	1
0121192020	RR-5	RR	0.25	0.20	1	1
0105210450	RR-5	RR	5.09	0.20	1	1
0121201020	RR-5	WS	7.96	0.20	1	1
0102210040	RR-5	RR	0.04	0.20	1	1
0102210030	RR-5	RR	9.04	0.20	1	1
0123020230	RR-5	RR	0.33	0.20	1	1
0123020410	RR-5	RR	0.71	0.20	1	1
0103020260	RR-5	RR	6.44	0.20	1	1
0105050900	RR-5	RR	5.01	0.20	1	1
0133050280	RR-5	UR-RR	3.98	0.20	1	1
0106230840	RR-5	RR	5.25	0.20	1	1
0103060150	RR-5	RR	4.56	0.20	1	1
0105040720	RR-5	RR	4.87	0.20	1	1
0104150530	RR-5	RR	5.81	0.20	1	1
0102210010	RR-5	RR	10.92	0.20	1	2
0102221070	RR-5	WS	7.07	0.20	1	1
0105070280	RR-5	RR	1.24	0.20	1	1
0123060480	RR-5	RR	8.97	0.20	1	1
0153170120	RR-5	RR	6.69	0.20	1	1
0103060180	RR-5	RR	29.87	0.20	1	5
0105100050	RR-5	RR	22.56	0.20	1	4
0123060590	RR-5	RR	0.16	0.20	1	1
0105210660	RR-5	RR	5.38	0.20	1	1
0103020310	RR-5	RR	4.89	0.20	1	1
0103020240	RR-5	RR	5.63	0.20	1	1
0105070330	RR-5	RR	0.47	0.20	1	1
0123060470	RR-5	RR	3.56	0.20	1	1
0105040250	RR-5	RR	5.87	0.20	1	1
0123060600	RR-5	RR	4.86	0.20	1	1
0103020300	RR-5	RR	5.24	0.20	1	1
0123140170	RR-5	RR	10.77	0.20	1	2
0123020240	RR-5	RR	5.08	0.20	1	1
0105020610	RR-5	RR	3.89	0.20	1	1
0121191230	RR-5	WS	0.01	0.20	1	1
0153170190	RR-5	RR	5.26	0.20	1	1
0106080340	RR-5	RR	5.03	0.20	1	1
0104120300	RR-5	RR	4.83	0.20	1	1
0104120470	RR-5	RR	10.17	0.20	1	2
0121191050	RR-5	WS	7.40	0.20	1	1
0121191110	RR-5	RR	0.16	0.20	1	1
0103060140	RR-5	RR	7.93	0.20	1	1
0103050410	RR-5	RR	6.66	0.20	1	1
0105200300	RR-5	RR	6.00	0.20	1	1
0123060420	RR-5	RR	8.86	0.20	1	1
0123020460	RR-5	RR	2.84	0.20	1	1
0121201040	RR-5	RR	0.01	0.20	1	1
0105070290	RR-5	RR	1.89	0.20	1	1
0104120870	RR-5	RR	7.64	0.20	1	1
0121201080	RR-5	RR	0.96	0.20	1	1
0103020270	RR-5	RR	7.32	0.20	1	1
0121201130	RR-5	RR	0.41	0.20	1	1
0134260250	RR-5	RR	4.81	0.20	1	1
0105180780	RR-5	RR	5.77	0.20	1	1
0103020250	RR-5	RR	5.20	0.20	1	1
0103020290	RR-5	RR	6.98	0.20	1	1

APN	Zone	General Plan Land Use	Acreage	Maximim Allowed Density (Units Per Acre)	Current Capacity	Max Unit Capacity If Subdivided
0106250060	RR-5	UR-RR	11.77	0.20	1	2
0105080330	RR-5	RR	4.58	0.20	1	1
0123020220	RR-5	RR	0.41	0.20	1	1
0121192030	RR-5	RR	2.17	0.20	1	1
0121191240	RR-5	RR	6.71	0.20	1	1
0106210360	RR-5	RR	4.53	0.20	1	1
0123060450	RR-5	RR	11.75	0.20	1	2
0103020220	RR-5	RR	5.69	0.20	1	1
0133100070	RR-5	UC-HC	26.10	0.20	1	5
0106210550	RR-5	RR	4.66	0.20	1	1
0121191070	RR-5	RR	6.03	0.20	1	1
0105120400	RR-5	RR	4.74	0.20	1	1
0105080300	RR-5	RR	5.05	0.20	1	1
0121191030	RR-5	RR	3.73	0.20	1	1
0106210450	RR-5	RR	4.76	0.20	1	1
0104071200	RR-5	RR	5.02	0.20	1	1
0104120920	RR-5	RR	5.03	0.20	1	1
0123020010	RR-5	RR	0.51	0.20	1	1
0121191210	RR-5	WS	8.69	0.20	1	1
0104150600	RR-5	RR	13.03	0.20	1	2
0106080350	RR-5	RR	6.02	0.20	1	1
0102221060	RR-5	WS	6.68	0.20	1	1
0121191020	RR-5	WS	6.80	0.20	1	1
0105080310	RR-5	RR	5.24	0.20	1	1
0123070490	RR-5	RR	6.45	0.20	1	1
0121191130	RR-5	RR	0.30	0.20	1	1
0103020280	RR-5	RR	5.59	0.20	1	1
0102221040	RR-5	RR	6.25	0.20	1	1
0103020230	RR-5	RR	5.70	0.20	1	1
0123020300	RR-5	RR	4.68	0.20	1	1
0105180550	RR-5	RR	6.08	0.20	1	1
0123110160	RR-5	RR	2.86	0.20	1	1
0103050360	RR-5	RR	4.92	0.20	1	1
0105040220	RR-5	RR	5.05	0.20	1	1
0123060610	RR-5	RR	0.08	0.20	1	1
0105110280	RR-5	RR	1.08	0.20	1	1
0121191090	RR-5	RR	0.87	0.20	1	1
0121191220	RR-5	RR	0.01	0.20	1	1
0105170100	RR-5	RR	1.51	0.20	1	1
0104120890	RR-5	RR	5.53	0.20	1	1
0105210420	RR-5	RR	4.84	0.20	1	1
0121192010	RR-5	RR	0.99	0.20	1	1
0121201150	RR-5	RR	0.81	0.20	1	1
0105070310	RR-5	RR	0.34	0.20	1	1
0105170090	RR-5	RR	1.72	0.20	1	1
0121191010	RR-5	WS	0.92	0.20	1	1
0123010020	RR-5	RR	0.11	0.20	1	1
0104120480	RR-5	RR	9.84	0.20	1	1
0105110310	RR-5	RR	2.03	0.20	1	1
0104120490	RR-5	RR	9.89	0.20	1	1
0105110300	RR-5	RR	0.28	0.20	1	1
0123020100	RR-5	RR	0.47	0.20	1	1
0121191040	RR-5	RR	0.18	0.20	1	1
0104120910	RR-5	RR	4.98	0.20	1	1
0105020620	RR-5	RR	5.12	0.20	1	1
0121191060	RR-5	RR	1.14	0.20	1	1
Total RR-5					134	152
0074251250	RTC-10	TC-R	0.16	4.36	1	1

APN	Zone	General Plan Land Use	Acreage	Maximim Allowed Density (Units Per Acre)	Current Capacity	Max Unit Capacity If Subdivided
0074241170	RTC-10	TC-R	0.14	4.36	1	1
0075080480	RTC-10	TC-R	0.12	4.36	1	1
0074242040	RTC-10	TC-R	0.28	4.36	1	1
0074242070	RTC-10	TC-R	0.28	4.36	1	1
0074251320	RTC-10	TC-R	0.40	4.36	1	1
0074241180	RTC-10	TC-R	0.17	4.36	1	1
0074242050	RTC-10	TC-R	0.28	4.36	1	1
0075091080	RTC-10	TC-R	0.28	4.36	1	1
0074242020	RTC-10	TC-R	0.35	4.36	1	1
0075061120	RTC-10	TC-R	0.27	4.36	1	1
0075070370	RTC-10	TC-R	0.29	4.36	1	1
0074241200	RTC-10	TC-R	0.25	4.36	1	1
0074242030	RTC-10	TC-R	0.28	4.36	1	1
0075080470	RTC-10	TC-R	0.14	4.36	1	1
0074242060	RTC-10	TC-R	0.28	4.36	1	1
0075091440	RTC-10	TC-R	0.24	4.36	1	1
0074242080	RTC-10	TC-R	0.28	4.36	1	1
0074241060	RTC-10	TC-R	0.31	4.36	1	1
0075061050	RTC-10	TC-R	0.29	4.36	1	1
Total RTC-10					20	20
0044060060	RTC-15	TC-R	1.86	2.90	1	5
0044060120	RTC-15	TC-R	0.79	2.90	1	2
0044060020	RTC-15	TC-R	0.41	2.90	1	1
0044060080	RTC-15	TC-R	0.55	2.90	1	1
0147080040	RTC-15	TC-R	0.19	2.90	1	1
Total RTC-15					5	10
0027120030	RTC-1AC	TC-R	19.70	1.00	1	19
0147131280	RTC-1AC	TC-R	1.51	1.00	1	1
0153200040	RTC-1AC	TC-R	0.79	1.00	1	1
0153210140	RTC-1AC	RR	1.35	1.00	1	1
0147131290	RTC-1AC	TC-R	0.21	1.00	1	1
0153210020	RTC-1AC	RR	1.06	1.00	1	1
0027170100	RTC-1AC	TC-R	0.50	1.00	1	1
0153210120	RTC-1AC	RR	2.27	1.00	1	2
0147123200	RTC-1AC	TC-R	0.57	1.00	1	1
0153210010	RTC-1AC	RR	1.47	1.00	1	1
0147143280	RTC-1AC	TC-R	1.25	1.00	1	1
0153210130	RTC-1AC	RR	0.87	1.00	1	1
0147123070	RTC-1AC	TC-R	1.34	1.00	1	1
0147143210	RTC-1AC	RR	0.23	1.00	1	1
0153220010	RTC-1AC	TC-R	0.03	1.00	1	1
0147132100	RTC-1AC	TC-R	1.88	1.00	1	1
0147131010	RTC-1AC	TC-R	1.45	1.00	1	1
0147131270	RTC-1AC	TC-R	0.13	1.00	1	1
0153230040	RTC-1AC	TC-R	0.44	1.00	1	1
0153200050	RTC-1AC	TC-R	1.02	1.00	1	1
0153230070	RTC-1AC	RR	0.78	1.00	1	1
0153190090	RTC-1AC	TC-R	1.06	1.00	1	1
0153200030	RTC-1AC	TC-R	0.55	1.00	1	1
0142103080	RTC-1AC	TC-R	0.36	1.00	1	1
0147142170	RTC-1AC	TC-R	1.29	1.00	1	1
0147121010	RTC-1AC	TC-R	1.64	1.00	1	1
0153210030	RTC-1AC	RR	0.28	1.00	1	1
0027160010	RTC-1AC	TC-R	14.24	1.00	1	14
0147131300	RTC-1AC	TC-R	0.74	1.00	1	1
Total RTC-1AC					29	61
0071260310	RTC-20	TC-R	1.77	2.18	1	3
0071260280	RTC-20	TC-R	1.38	2.18	1	2

APN	Zone	General Plan Land Use	Acreage	Maximim Allowed Density (Units Per Acre)	Current Capacity	Max Unit Capacity If Subdivided
0071250150	RTC-20	TC-R	2.25	2.18	1	4
0074072140	RTC-20	TC-R	1.21	2.18	1	2
0142061020	RTC-20	TC-R	0.14	2.18	1	1
0153270040	RTC-20	RR	0.02	2.18	1	1
0142043010	RTC-20	TC-R	0.39	2.18	1	1
0071260290	RTC-20	TC-R	1.01	2.18	1	2
0074133040	RTC-20	TC-R	0.14	2.18	1	1
0074060620	RTC-20	TC-R	1.28	2.18	1	2
0044022110	RTC-20	TC-R	0.14	2.18	1	1
0074133020	RTC-20	TC-R	4.45	2.18	1	9
0142041010	RTC-20	AG	0.03	2.18	1	1
0147122040	RTC-20	TC-R	0.67	2.18	1	1
0147132010	RTC-20	TC-R	0.35	2.18	1	1
0147132020	RTC-20	TC-R	4.10	2.18	1	8
0142043060	RTC-20	TC-R	0.34	2.18	1	1
0074060650	RTC-20	TC-R	0.61	2.18	1	1
0142063020	RTC-20	TC-R	0.32	2.18	1	1
0142061160	RTC-20	TC-R	0.02	2.18	1	1
0044022130	RTC-20	AG	0.47	2.18	1	1
0044022040	RTC-20	TC-R	1.35	2.18	1	2
0074080250	RTC-20	TC-R	0.49	2.18	1	1
0071270260	RTC-20	TC-R	0.77	2.18	1	1
0071270010	RTC-20	TC-R	1.05	2.18	1	2
0074060520	RTC-20	TC-R	0.30	2.18	1	1
0074133120	RTC-20	TC-R	0.74	2.18	1	1
0071260330	RTC-20	TC-R	0.58	2.18	1	1
0142061100	RTC-20	TC-R	0.36	2.18	1	1
Total RTC-20					29	55
0074060640	RTC-6	TC-R	0.21	7.26	1	1
0074150200	RTC-6	TC-R	0.25	7.26	1	1
0074160500	RTC-6	TC-R	0.40	7.26	1	2
0074160080	RTC-6	TC-R	0.47	7.26	1	3
0071250320	RTC-6	TC-R	0.34	7.26	1	2
0074160480	RTC-6	TC-R	0.15	7.26	1	1
0074072200	RTC-6	TC-R	0.13	7.26	1	1
0074140470	RTC-6	TC-R	0.19	7.26	1	1
0074120220	RTC-6	TC-R	0.16	7.26	1	1
0074072360	RTC-6	TC-R	0.14	7.26	1	1
0074160710	RTC-6	TC-R	0.22	7.26	1	1
0074160190	RTC-6	TC-R	0.11	7.26	1	1
0074060470	RTC-6	TC-R	0.18	7.26	1	1
0074071020	RTC-6	TC-R	0.26	7.26	1	1
0074150210	RTC-6	TC-R	0.29	7.26	1	2
0074072240	RTC-6	TC-R	0.04	7.26	1	1
0074140540	RTC-6	TC-R	0.83	7.26	1	6
0074160650	RTC-6	TC-R	0.06	7.26	1	1
0074060060	RTC-6	TC-R	0.11	7.26	1	1
0074160690	RTC-6	TC-R	0.15	7.26	1	1
0074160780	RTC-6	TC-R	0.37	7.26	1	2
0074160030	RTC-6	TC-R	0.49	7.26	1	3
0074160700	RTC-6	TC-R	0.18	7.26	1	1
0074140420	RTC-6	TC-R	0.80	7.26	1	5
0071250330	RTC-6	TC-R	0.09	7.26	1	1
0074170130	RTC-6	TC-R	0.21	7.26	1	1
0074160530	RTC-6	TC-R	0.41	7.26	1	2
0074160460	RTC-6	TC-R	0.18	7.26	1	1
0071250210	RTC-6	TC-R	0.30	7.26	1	2
0074060160	RTC-6	TC-R	0.17	7.26	1	1

APN	Zone	General Plan Land Use	Acreage	Maximim Allowed Density (Units Per Acre)	Current Capacity	Max Unit Capacity If Subdivided
Total RTC-6					30	49
Low Density Subtotals					566	1351
0075070400	RTC-D6	TC-R	0.22	7.26	1	1
0075091350	RTC-D6	TC-R	0.27	7.26	2	1
0075091140	RTC-D6	TC-R	0.29	7.26	2	2
0075091150	RTC-D6	TC-R	0.32	7.26	2	2
0075091240	RTC-D6	TC-R	0.45	7.26	3	3
Total RTC-D6					9	9
0074080170	RTC-MF	TC-R	0.15	4.00	0	1
0074080220	RTC-MF	TC-R	0.58	4.00	2	2
0071270090	RTC-MF	TC-R	0.12	4.00	0	1
0074080230	RTC-MF	TC-R	0.17	4.00	1	1
0074080240	RTC-MF	TC-R	0.16	4.00	1	1
0074080210	RTC-MF	TC-R	0.62	4.00	2	2
0071270200	RTC-MF	TC-R	0.37	4.00	1	1
Total RTC-MF					7	9
0142063010	RTC-MU	TC-R	0.22	4.00	1	1
0044060050	RTC-MU	TC-R	0.20	4.00	1	1
0044080030	RTC-MU	TC-R	0.23	4.00	1	1
0044071330	RTC-MU	TC-R	1.82	4.00	6	7
0044060040	RTC-MU	TC-R	0.18	4.00	1	1
Total RTC-MU					8	11
Moderate Density Subtotals					24	29



0
2
4
Miles

Appendix C

Vacant Land Inventory

PMC

Appendix

D HOUSING ELEMENT MAILING LIST

**Mailing list for Solano
County 5th Cycle Housing
Element Outreach**

BRIDGE HOUSING CORPORATION
345 SPEAR STREET, SUITE 700
SAN FRANCISCO CA 94105

SOLANO COUNTY HEALTH AND
SOCIAL SERVICES
275 BECK AVENUE
FAIRFIELD CA 94533

COALITION AGAINST
HOMELESSNESS
724 OHIO STREET
FAIRFIELD CA 94533

INTERFAITH COUNCIL
724 OHIO STREET
FAIRFIELD CA 94533

ART ENGELL, SALSMAN-ENGELL
REAL ESTATE
900 N. TEXAS STREET, SUITE B
FAIRFIELD CA 94533

NORTHERN SOLANO COUNTY
ASSOCIATION OF REALTORS
3690 HILBORN ROAD
FAIRFIELD CA 94534

LEGAL SERVICES OF NORTHERN
CALIFORNIA
1810 CAPITOL STREET
VALLEJO CA 94590

BUILDING INDUSTRY ASSOCIATION
OF NORTHERN CALIFORNIA
1215 K STREET, SUITE 1200
SACRAMENTO CA 95814

MID PENINSULA HOUSING
CORPORATION
303 VINTAGE PARK DRIVE,
SUITE 250
FOSTER CITY CA 94404

FAIRFIELD SENIOR CENTER,
1200 CIVIC CENTER DRIVE
FAIRFIELD CA 94533

Antonio Serrano Valdez, Jr.
Staff Attorney
Legal Services of Northern CA
Vallejo Office
1810 Capitol Street
Vallejo, CA 94590

FAIRFIELD CIVIC CENTER
LIBRARY
1150 KENTUCKY ST
FAIRFIELD CA 94533

GERRY RAYCRAFT, VICE PRES
SOLANO-NAPA HABITAT FOR
HUMANITY
5130 FULTON DRIVE SUITE R
FAIRFIELD CA 94534

CHAPTER

2

LAND USE

INTRODUCTION

The Land Use chapter describes present and planned land uses and their relationship to the County's long range goals for the future. It provides a framework for other issues examined in the General Plan and identifies how land is used throughout the county for agriculture, housing, business, community facilities, transportation, recreation, and open space. The chapter consists of text, maps, and diagrams outlining land uses within Solano County and describing how these uses are integrated with other General Plan chapters and policies.

The General Plan vision statement states in part:

Our respect for human and environmental needs will guide our land use decisions and where development takes place. We will continue to guide most growth into our cities and collaborate with officials in those cities to promote sustainable development. By continuing this practice, we can sustain the unique character and identity of our communities. We will use our natural habitat, farmlands, and water resources to maintain separation among our cities and unincorporated communities. These features will continue to contribute to our identity and economy and help to protect our people from flooding and other natural hazards.

By considering human and environmental needs equally, we can create a place where people may choose to live, work, and play within close proximity; a place where nature, farmlands, and water are valued; and a place where people have choices for housing, employment, transportation, and recreation.

The vision statement provides a basis for the basic strategies of the Land Use chapter:

- promoting city-centered development consistent with longstanding County policy that "What is urban shall be municipal" and

- sustaining diverse land uses that define the character and identity of Solano County.

The Land Use chapter includes descriptions of the land use designations, goals, policies, and implementation programs which will help Solano County implement its vision through 2030.

Scope and Content

This chapter consists of several sections: this section, "Introduction"; "Land Use Plan," which discusses the County's land use strategy and diagram; the general goals, policies, and implementation plans for Solano County; and "Special Study Areas," which includes goals, policies, and implementation programs for four special study areas within the county that face unique planning issues.

The land use plan identifies land use designations, the planned locations for each designation (shown in the land use diagram), and a description of density, intensity, and uses permitted in each designated area. The discussion of goals, policies, and implementation programs establishes goals and policies to address identified land use and growth management issues. The goals identify overall County desires and consist of broad statements of purpose and direction. The policies are guidelines to achieve land use and growth management goals. Implementation programs for the Land Use chapter follow the goals and policies.

Purpose and Relationship to Other General Plan Chapters

The Land Use chapter is often considered the "umbrella" chapter of a general plan because it provides an overall framework that covers issues and policies considered in greater detail in other chapters. For example, land use policies within Solano County have a direct bearing on the street system identified in the Transportation and Circulation chapter. Potential infrastructure and service needs of development consistent with the land use plan determine the needs to be met in the Public Facilities and Services chapter. Other general plan issues regarding safety, noise, and the natural environment directly relate to the policies and land use plan contained in this chapter.

State law (California Government Code Section 65302[a]) defines the requirements for a land use element. The Governor's Office of Planning and Research offers guidance to ensure that general plans fulfill the requirements of California law. The following land use topics applicable to Solano County must be included in a general plan:

- Distribution of housing, business, and industry
- Distribution of open space, including agricultural land

- Distribution of mineral resources and provisions for their continued availability
- Distribution of recreation facilities and opportunities
- Location of educational facilities
- Location of public buildings and grounds
- Location of future solid and liquid waste facilities
- Identification of areas subject to flooding
- Identification of existing Timberland Preserve Zone lands
- Other categories of public and private uses of land

Many of the land use element topics defined by the Governor's Office of Planning and Research are addressed in other chapters of the General Plan:

- Infrastructure, public facilities, and utilities are addressed in the Public Facilities and Services chapter. That chapter discusses water facilities and services, sewer and wastewater, solid waste, public education, community facilities, law enforcement, and utilities. (Chapter 8)
- Drainage and flood control, fire protection, and emergency services are discussed in the Public Health and Safety chapter. (Chapter 5)
- Agricultural land is discussed in the Agriculture chapter. (Chapter 3)
- Open spaces and mineral resources are discussed in the Resources chapter. (Chapter 4)
- Recreation facilities and opportunities are described in the Resources and Park and Recreation chapters. (Chapters 4 and 10)

PLANNING CONTEXT

Solano County comprises 910 square miles (582,255 acres), including about 830 square miles of land and about 80 square miles of water. Land area is divided into two topographic sections. The western quarter extends into the foothills of the coastal range. This area is characterized by steep slopes, which become more gently rolling in the eastern portion. The remainder of the County is part of the Sacramento Valley, which is characterized by level topography, with some isolated areas of low rolling hills. Other significant features include the Suisun Marsh, which has an area of more than 30 square miles, and the Napa-Sonoma Marsh area, with an area of more than 60 square miles, some of which is in Solano County.

The unincorporated area of the county includes approximately 773 square miles (494,437 acres). Approximately 81,678 acres of the county, or 14 percent of the total land area, is in cities (Table LU-1). Solano County's cities include Benicia, Dixon, Fairfield, Rio Vista, Suisun City, Vacaville, and Vallejo. Because of Solano County's commitment to focus development within urban areas, about 95 percent of the county's population lives in the cities. In 2000, only 19,322 of Solano County's 394,542 residents lived in the unincorporated area.



Solano Land Trust ©

Suisun Marsh is located in the southern portion of the county.

**Table LU-1
Cities in the County (2008)**

Cities	Acreage	Percent of Total County Area
Benicia	8,200	1.4%
Dixon	4,547	0.8%
Fairfield	24,290	4.2%
Rio Vista	4,170	0.7%
Suisun City	2,577	0.4%
Vacaville	18,310	3.1%
Vallejo	19,584	3.4%
TOTAL Incorporated Area	81,678	14.0%
TOTAL Unincorporated Area	494,437	84.9%
Existing Right of Ways (Unincorporated area)	6,140	1.1%
TOTAL County Area	582,255	100.0%

The County has historically required that development requiring water and sewer service be incorporated within one of the County's cities. Based on this policy, most residential, commercial and industrial development in the county has been in incorporated areas.

Table LU-2 provides a break down of the 2006 existing land uses in Solano County.

**Table LU-2
Existing Land Use Distribution (2006)**

Land Use Categories	Total	Percentage of Total
Water	51,092	8.8%
Park and Recreation	791	0.1%
Marsh	64,731	11.1%
Watershed	36,575	6.3%
Agriculture	329,076	56.5%
Public/Quasi-Public	1,517	0.3%
Residential	6,878	1.2%
Commercial	640	0.1%
Industrial	2,125	0.4%
Vacant Land	1,011	0.2%
TOTAL Unincorporated Area	494,437	84.9%
TOTAL Incorporated Area	81,678	14.0%
Existing Roadway/Railroad Right of Ways	6,140	1.1%
TOTAL County	582,255	100.0%

About 20 percent of the unincorporated land area is some type of undeveloped natural resource land. This includes marsh and watershed lands in the southern and western portions of the county comprising 101,307 acres.

Over 329,000 acres of land are in agricultural use, approximately 70 percent of the unincorporated land area. Agricultural land is concentrated in the eastern portion of the county and in smaller areas scattered throughout the county. Watershed lands are also in agricultural use.

Residential land uses occupy approximately 6,878 acres developed mostly at rural residential densities of one dwelling unit per 2.5 or more acres. Rural residential development has been concentrated in the area north of Vacaville in the English Hills, Allendale and Olive School areas, along Leisure Town Road east of Vacaville, in the Tolonas area of unincorporated Suisun City, and the Green Valley area north of Fairfield. Residential estate use at densities of one unit per ¼ to 1 acre exist in the Green Valley, Rockville Corners, Willotta Oaks, Old Town Cordelia, Elmira, Birds Landing and Collinsville area. A small amount of the unincorporated county's residential land is used for urban density residential single family

and multifamily development including apartment buildings, duplexes, triplexes and similar housing types located in unincorporated areas in Vallejo.

Industrial land uses account for about 2,125 acres of land area in the unincorporated county. Most of the existing industrial development in the county is within cities.

Approximately 641 acres are in commercial land use, which includes retail, commercial services, and service stations. Smaller commercial developments are located in the unincorporated county areas to serve the needs of local residents and visitors. Highway-oriented commercial development represents the predominant commercial land use in the unincorporated area with the majority of such land located along Interstate 80.

Other uses of land in the county include public use (such as schools, cemeteries, and federal lands), which accounts for about 1,517 acres, park and recreation land (791 acres), and vacant land, which includes about 1,011 acres.

LAND USE PLAN

The land use plan for Solano County guides the manner in which areas of the county may grow and how resources will be conserved through 2030 and beyond. Land uses are classified and mapped, showing areas of continued agricultural and open space use, as well as areas where the County anticipates future residential, commercial, and industrial development. The land use plan also identifies areas set aside for community purposes, such as parks and schools.

The land use plan describes the County's approach to land use regulation, including densities, intensities, and desired uses for 25 land use designations. The vision statement identifies Solano County's continuing practice of guiding urban development, including most residential and commercial development, toward the county's cities using municipal service areas.

Land Use Diagram

The land use diagram (Figure LU-1) graphically represents the planned distribution of land uses in Solano County. The colors shown on the map correspond to 25 land use designations. These designations describe the type and nature of uses allowed in Solano County. The majority of Solano County's land remains in agricultural or open-space designations. The land use designations are described in detail on the following pages.

Solano County General Plan

Figure LU-1

Land Use Diagram

Legend

Municipal Service Areas

General Plan Land Use Designations

Natural Resource Designations

Water Bodies and Courses

Park and Recreation

Marsh

Agricultural Designations

Watershed

Agriculture

Public Designations

Public/Quasi-Public

Residential Designations

Rural Residential

Traditional Community - Residential

Traditional Community - Mixed Use

Urban Residential

Commercial Designations

Neighborhood Commercial

* Neighborhood Agricultural/Tourist Center

Commercial Recreation

Service Commercial

Highway Commercial

Urban Commercial

Industrial Designations

General Industrial

Limited Industrial

Water Dependent Industrial

Urban Industrial

Special Purpose Areas

Joint Study Area

Specific Project Area

Urban Project Area

Overlays

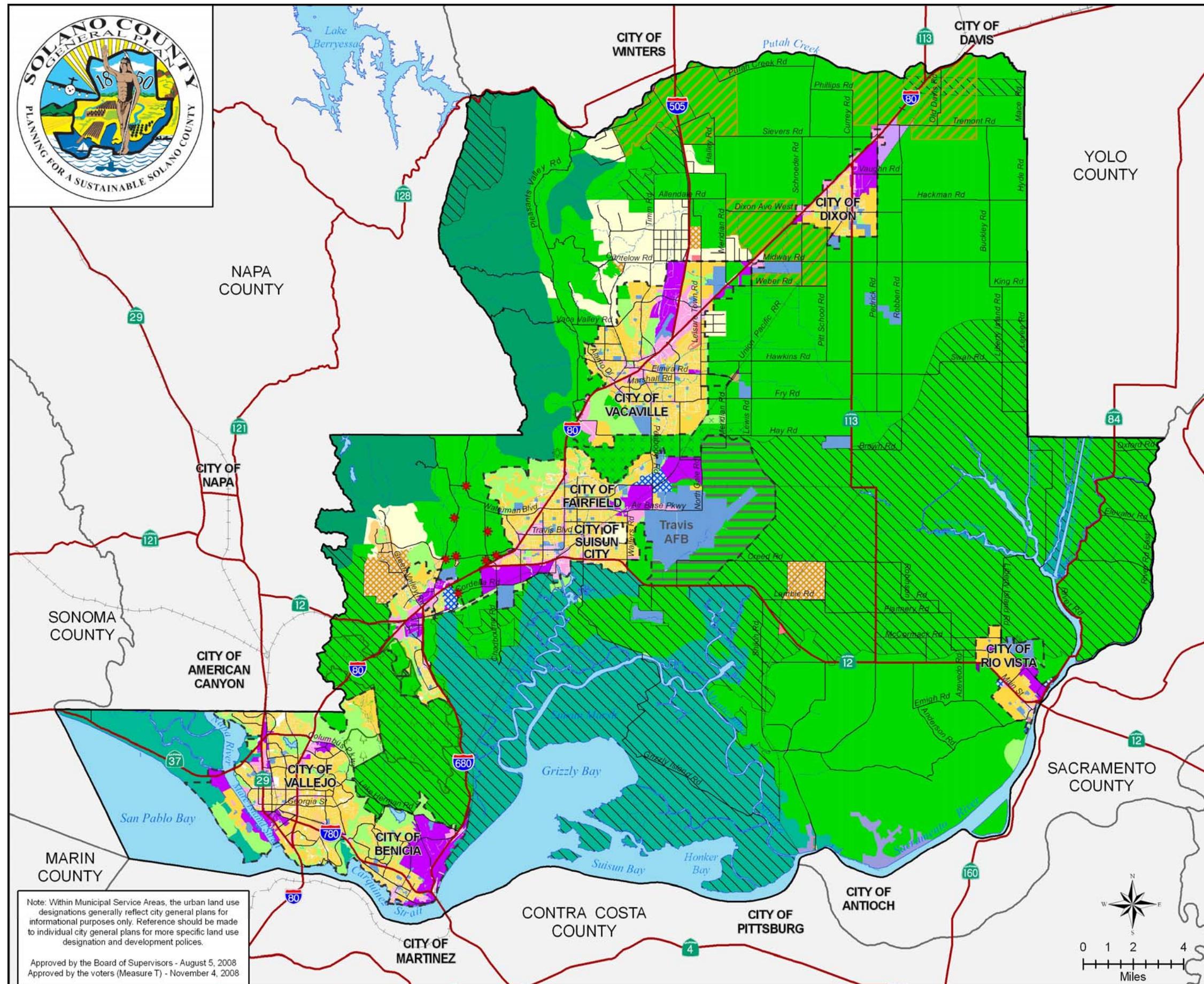
Vacaville-Fairfield-Solano Greenbelt

Travis Reserve Area

Agricultural Reserve Overlay

Tri-City/County Cooperative Planning Area

Resource Conservation Overlay



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Within the municipal service areas shown on the land use diagram, the urban land use designations generally reflect city general plans for informational purposes only. Reference should be made to individual city general plans for more specific land use designations and development policies.

Land Use Diversity

A diverse and desirable balance of land uses can help to support the County's fiscal viability and promote a desirable community in which people work, shop, live, visit, and recreate. A diversity of land uses also has positive effects on community livability and quality of life. Solano County's cities contain most of the county's urban development.

The unincorporated area includes primarily agricultural and open space land, along with some rural residential, commercial, and industrial areas. The unincorporated county is particularly well suited for uses, such as agricultural-related industries, that are not appropriate within more densely populated areas due to noise, odor and other effects. Maximizing benefits to county residents, taking advantage of new economic opportunities, and protecting valuable environmental resources are the driving forces behind the land use plan.

Measuring Land Use Density and Intensity

Terms such as "residential," "commercial," and "industrial" are generally understood, but state law requires a clear and concise description of these designations and categories as shown in the land use diagram. Population and intensity standards must also be specified. To describe the intensity of use—how much development may be on a property—land use planners have developed quantitative measures called density and intensity.

The term "density" is used for residential uses and refers to the population and development capacity of residential land. Density is described in terms of dwelling units per acre of land (du/ac).

"Development intensity" refers to the extent of development on a parcel of land or lot—that is measured by the, the total square footage of a building, building height, the floor-area ratio, and/or the percent of lot coverage. Intensity generally describes levels of nonresidential development; however, in a broader sense, intensity also can be used to express overall levels of both residential and nonresidential development types. For land uses in Solano County, floor-area ratio is used as a measure of nonresidential development intensity. The floor-area ratio (FAR) describes the relationship between the total square footage of development on a lot to the area of that lot. The floor area does not include areas used for parking. The FAR is determined by dividing the total floor area of all buildings on a lot by the total land area of the lot, less any portion used for roads.

Figure LU-2 illustrates how the FAR controls the intensity of use on a lot. For example, a 20,000-square-foot building on a 40,000-square-foot lot yields an FAR of 20,000:40,000, or 0.50. A FAR of 0.50 allows construction of either a single-story building that covers half the lot or a two-story building with reduced lot coverage.

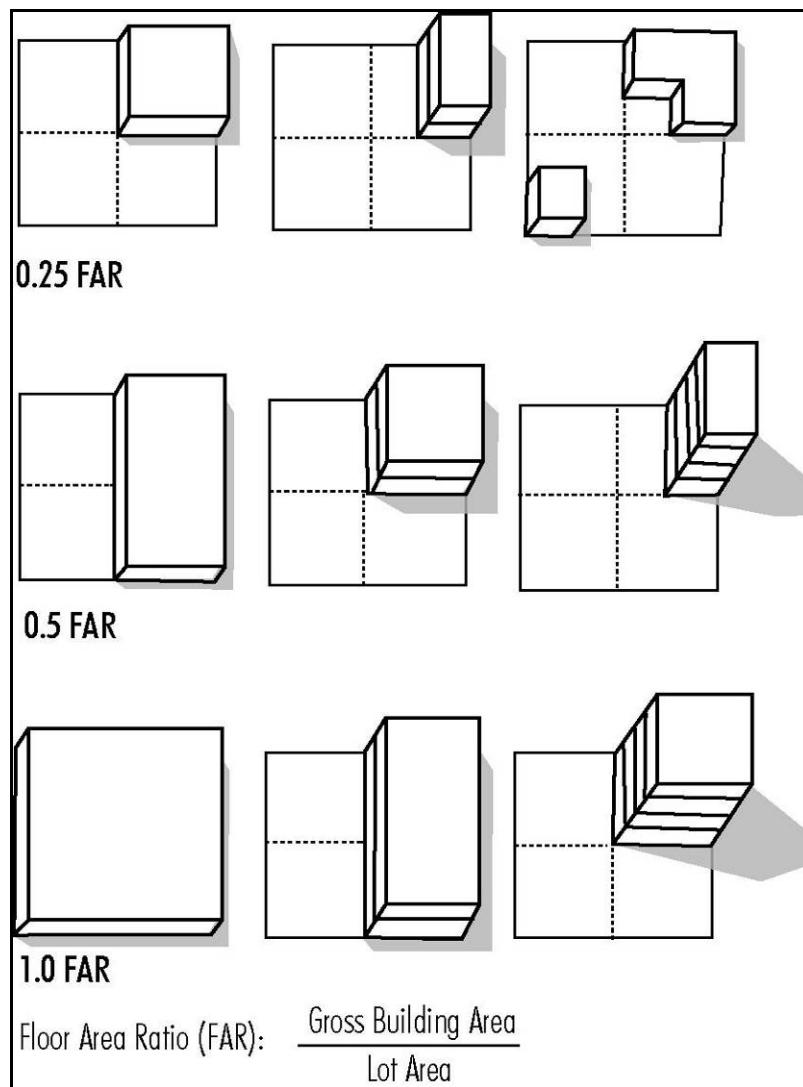


Figure LU-2
Examples of Floor-Area Ratio (FAR)

Development Capacity

The General Plan specifies maximum and estimated levels of residential and nonresidential development for land in Solano County that is developed according to the land use diagram. The estimated levels of development establish a future capacity for the county, expressed as estimates of total dwelling units, total population, and total square footage of future nonresidential development. Table LU-3 summarizes the

General Plan's development capacity within the unincorporated county area.

Table LU-3
General Plan 2030 Land Use Estimated Development Capacity in Unincorporated Solano County

General Plan Designations	Acres	Dwelling Units	Population	Non Residential Square Feet
Water Bodies and Courses	51,092	—	—	—
Park and Recreation	2,132	—	—	—
Marsh	65,613	—	—	—
Subtotal Natural Resource Designations	118,837	—	—	—
Watershed	36,575	80	210	—
Agriculture	312,400	1,821	4,785	1,192,784
Subtotal Agricultural Designations	348,975	1,901	4,995	1,192,784
Public/Quasi-Public	1,871	—	—	—
Subtotal Public Designations	1,871	—	—	—
Rural Residential	12,865	2,573	6,760	—
Traditional Community—Residential	980	1,960	5,148	—
Traditional Community—Mixed Use	108	65	170	393,548
Urban Residential	1,890	5,674	14,908	—
Subtotal Residential Designations	15,843	10,271	26,986	393,548
Neighborhood Commercial	6	—	—	32,943
Neighborhood Agricultural/Tourist Center	75	—	—	392,040
Commercial Recreation	155	—	—	54,142
Service Commercial	75	—	—	394,221
Highway Commercial	133	—	—	695,942
Urban Commercial	588	—	—	3,072,180
Subtotal Commercial Designations	1,033	—	—	4,641,469
General Industrial	8	—	—	11,584
Limited Industrial	703	—	—	1,071,755
Water Dependent Industrial	1,350	—	—	587,924
Urban Industrial	1,254	—	—	1,911,425
Subtotal Industrial Designations	3,314	—	—	3,582,689
Specific Project Areas	3,747	418	1,098	1,701,889
Urban Project Areas	817	2,200	6,030	491,233
Subtotal Special Purpose Areas	4,564	2,618	7,128	2,193,123
TOTAL Unincorporated Area	494,437	14,791	39,109	12,003,612
Overlays (Not Counted in Total)				
Vacaville-Fairfield-Solano Greenbelt	4,073	—	—	—
Travis Reserve Area	7,971	—	—	—
Agricultural Reserve Overlay	21,734	—	—	—
Tri-City/County Cooperative Planning Area	9,968	—	—	—
Resource Conservation Overlay	217,753	—	—	—

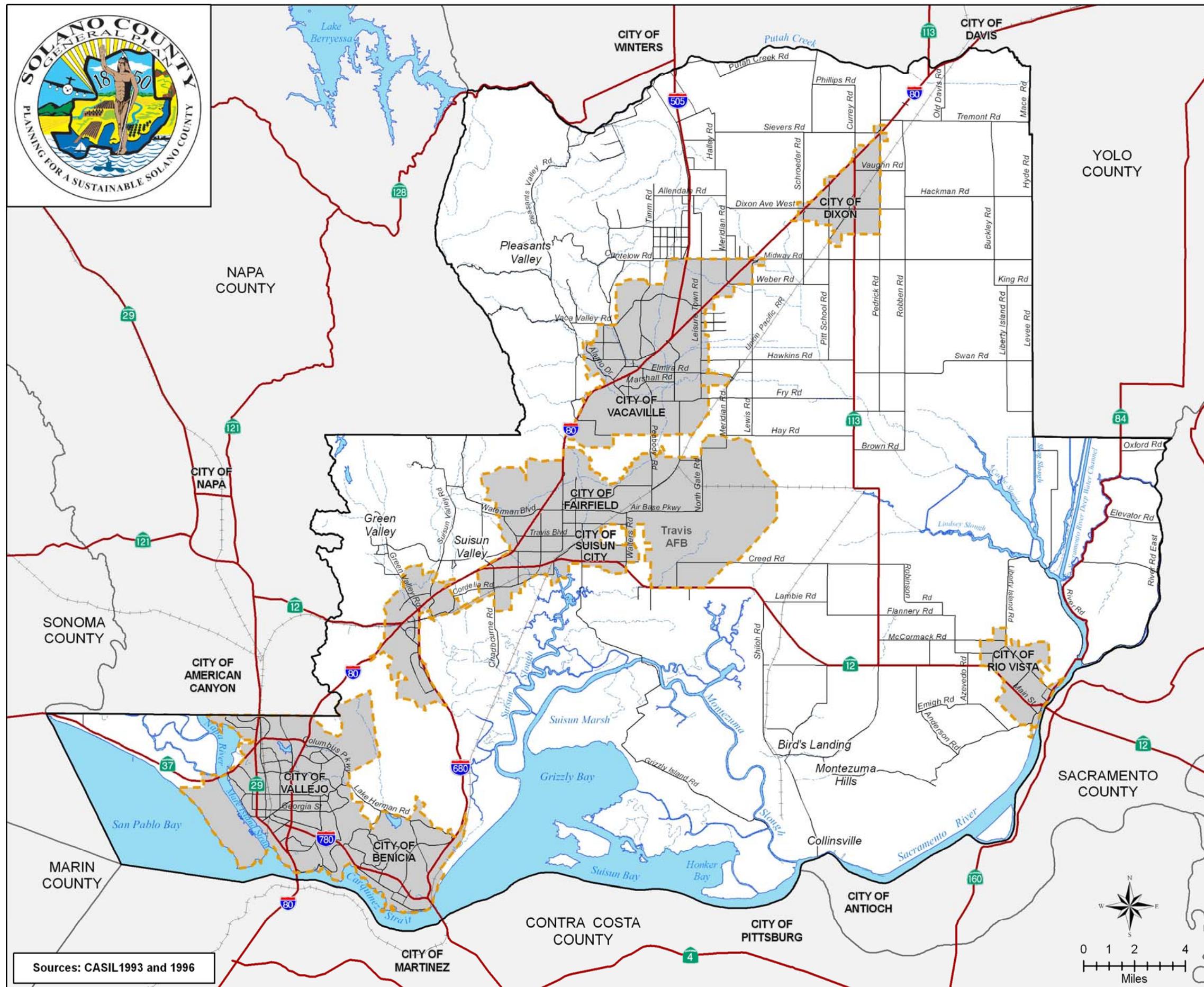
Municipal Service Areas

A municipal service area (MSA) defines the area of a city's current and/or future jurisdictional responsibility. Within the MSA, a city must provide the necessary services to support urban land uses specified by the County General Plan policies and land use diagram. Figure LU-3 shows an example of how MSAs delineate city planned growth areas. MSAs reflect city planned urban growth areas and are based on County review of city general plans and spheres of influence established by the Solano Local Agency Formation Commission (LAFCO). Figure LU-4 shows the current MSA boundaries.



Figure LU-3
Municipal Service Area Concept Diagram

Within MSAs, future development of urban land uses is to be facilitated and served through city annexation. Current land uses within MSAs may continue under County jurisdiction until the land is annexed to the city for conversion to urban uses. A change in land use of unincorporated lands within MSAs should be permitted only for agricultural uses which do not conflict with planned land uses until annexed for urban development. Unincorporated lands within the MSAs that are designated Agriculture will continue in agricultural use until annexed to a city for urban development are shown in Figure LU-5.

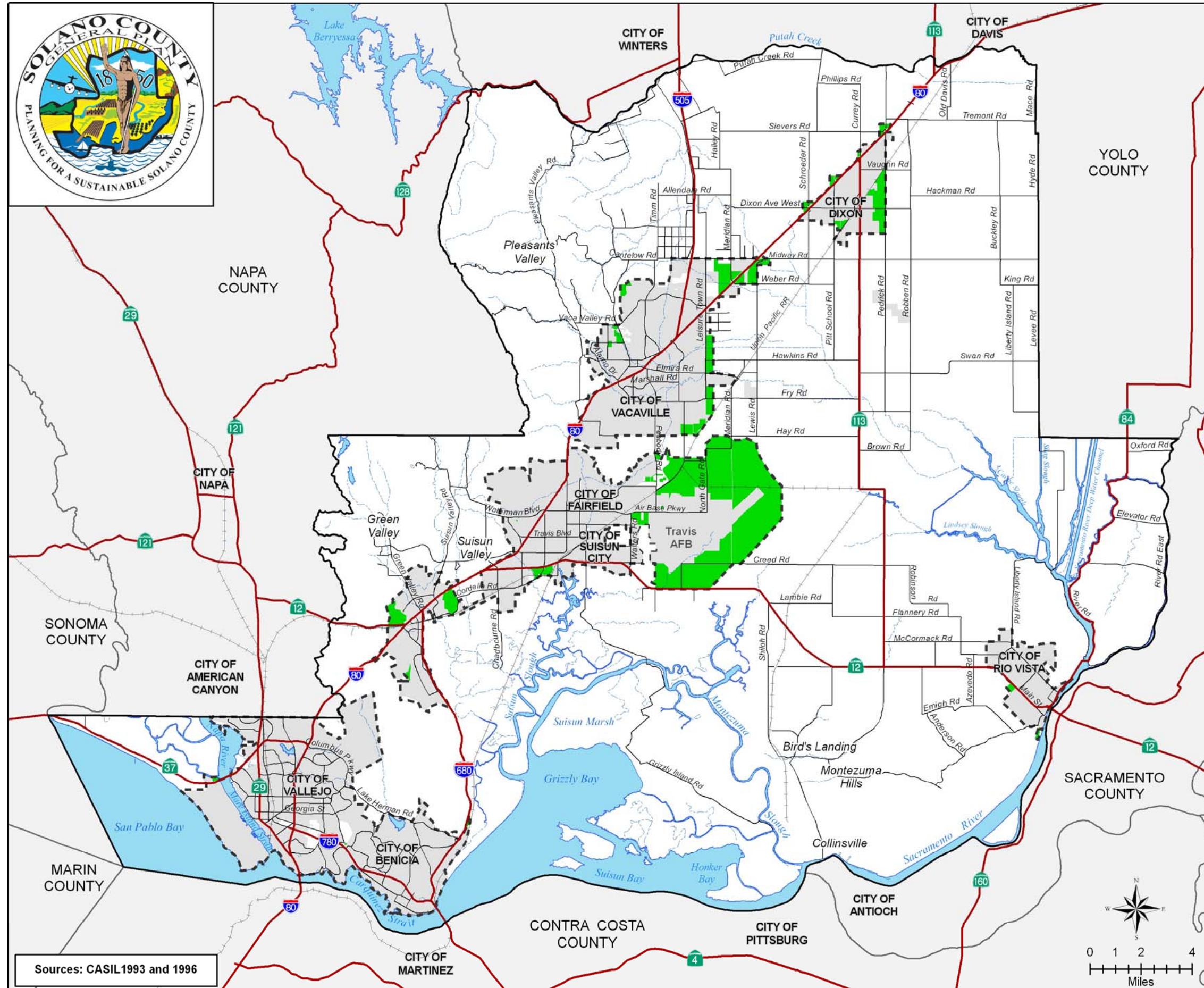


Solano County General Plan
Figure LU-4
Municipal Service Areas

Legend

- Municipal Service Areas:** Shaded gray areas.
- Basemap Layers:**
 - Roadways
 - Highways
 - Railroads
 - Streams and Creeks
 - Major Water Features
 - Adjacent Counties

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Solano County General Plan

Figure LU-5

Interim Agricultural Areas within Unincorporated MSAs

Legend

- Interim Agricultural Areas within MSAs
- Basemap Layers
 - Roadways
 - Highways
 - Railroads
 - Streams and Creeks
 - Major Water Features
- Municipal Service Areas
- City Limits
- Adjacent Counties

Note: General Plan policies provide for continued agricultural uses within unincorporated MSAs until properties are annexed by cities for development.

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In areas outside MSAs, planned land uses are to be maintained or developed under County jurisdiction. Services to support current and future development outside MSAs will be provided by the County and special districts consistent with General Plan policies.

Land uses depicted on the land use diagram within MSAs generally are consistent with the planned land uses within each city's general plan. Individual city general plans should be used to determine specific land use designations and development policies within MSAs. Table LU-4 shows the breakdown of land uses and development capacity in the unincorporated county area inside and outside of MSAs.

In establishing MSAs, the County recognizes that local jurisdictions will periodically revise and update their general plans. Based on the revisions to a city general plan, the city and County will review and may recommend that Solano LAFCO approve revisions to the city's sphere of influence. As part of this joint review, the County will also review the city land use changes and consider amending the County's land use diagram to revise the MSA and incorporate the new urban land uses.

An MSA is established for each city and is depicted on the land use diagram. Within the MSA, the city urban land uses are incorporated on the County's land use diagram as Urban Residential, Urban Commercial, and Urban Industrial.

Land Use Designations

Table LU-5 provides a description of each General Plan land use designation and the range of density or intensity of development permitted within each category. The maximum allowable development on individual parcels is governed by these measures. General Plan land use designations are grouped into eight general categories: natural resource, agricultural, residential, commercial, industrial, public use, special purpose areas, and overlays.

General Plan land use policy will be implemented through the County's Zoning Ordinance, which will be comprehensively updated following adoption of the General Plan. State planning law requires consistency between the County's General Plan and Zoning Ordinance.

Development densities and intensities are shown in Table LU-5 for each land use designation. These levels of development represent the maximum density and intensity of development in each designation and do not preclude development at lower levels within commercial and industrial designations.

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Table LU-4
General Plan 2030 Land Use Designations in Unincorporated County and Unincorporated Municipal Service Areas

Land Use Categories / General Plan Designations	General Plan 2030											
	Acres			Dwelling Units			Population			Non Residential (square feet)		
	County ¹	MSA ²	Total	County ¹	MSA ²	Total	County ¹	MSA ²	Total	County ¹	MSA ²	Total
Subtotal Natural Resource Designations	117,321	1,517	118,837	—	—	—	—	—	—	—	—	—
Subtotal Agricultural Designations	340,368	8,607	348,975	1,821	4	1,901	4,984	11	4,995	1,190,830	1,954	1,192,784
Subtotal Public Designations	1,405	466	1,871	—	—	—	—	—	—	—	—	—
Rural Residential	12,865	0	12,865	2,573	—	2,573	6,760	0	6,760	—	—	—
Traditional Community—Residential	694	286	980	1,388	572	1,960	3,646	1,502	5,148	—	—	—
Traditional Community—Mixed Use	71	36	108	43	22	65	113	57	170	261,586	131,963	393,548
Urban Residential	8	1,882	1,890	74	5,600	5,674	194	14,714	14,908	—	—	—
Subtotal Residential Designations	13,639	2,204	15,843	4,078	6,194	10,271	10,714	16,272	26,986	261,586	131,963	393,548
Neighborhood Commercial	6	—	6	—	—	—	—	—	—	32,943	—	32,943
Neighborhood Agricultural/Tourist Center	75	—	75	—	—	—	—	—	—	392,040	—	392,040
Commercial Recreation	155	—	155	—	—	—	—	—	—	54,142	—	54,142
Service Commercial	75	—	75	—	—	—	—	—	—	394,221	—	394,221
Highway Commercial	133	—	133	—	—	—	—	—	—	712,251	—	712,251
Urban Commercial	1	587	588	—	—	—	—	—	—	4,945	3,067,236	3,072,180
Subtotal Commercial Designations	446	587	1,033	—	—	—	—	—	—	1,574,234	3,067,236	4,641,469
General Industrial	8	—	8	—	—	—	—	—	—	11,584	—	11,584
Limited Industrial	703	—	703	—	—	—	—	—	—	1,071,755	—	1,071,755
Water Dependent Industrial	1,350	—	1,350	—	—	—	—	—	—	587,924	—	587,924
Urban Industrial	0	1,254	1,254	—	—	—	—	—	—	314	1,911,111	1,911,425
Subtotal Industrial Designations	2,060	1,254	3,314	—	—	—	—	—	—	1,671,577	1,911,111	3,582,689
Subtotal Special Purpose Areas	3,746	817	4,564	418	2,200	2,618	1,098	6,030	7,128	1,701,889	491,233	2,193,123
TOTAL Area	478,986	15,451	494,437	6,393	8,398	14,791	16,796	22,314	39,109	6,400,116	5,603,496	12,003,612

Notes: ¹County = unincorporated county area outside MSA

²MSA = unincorporated county area inside MSA

Table LU-5
General Plan Land Use Designations

Designation and Density or Intensity	Description
Natural Resources Designations	
WB Water Bodies and Courses	Applies to major waterways and lakes located within the county.
PR Park and Recreation	Provides for public park and recreation areas throughout the county.
M Marsh <i>1 du/250 ac</i>	Provides for protection of marsh and wetland areas. Permits aquatic and wildlife habitat, marsh-oriented recreational uses, agricultural activities compatible with the marsh environment and marsh habitat, educational and scientific research, educational facilities supportive of and compatible with marsh functions, and restoration of historic tidal wetlands.
Agricultural Designations	
WS Watershed <i>1 du/160 ac</i>	Provides for the protection of water quality by limiting development where such development could significantly degrade surface water quality. Comprises hills and mountains in areas used primarily for grazing. Watershed areas typically feature hazardous site characteristics such as steep slopes with high soil erosion potential, fire hazards, and unstable soils, and may be undevelopable. Watershed areas also provide wildlife habitat. Uses in this area are restricted to agricultural or passive open space uses.
AG Agriculture <i>Minimum lot sizes</i> <i>determined by agricultural region in Table AG-3 and Figure AG-4 in the Agriculture chapter</i>	Provides areas for the practice of agriculture as the primary use, including areas that contribute significantly to the local agricultural economy, and allows for secondary uses that support the economic viability of agriculture. Agricultural land use designations protect these areas from intrusion by nonagricultural uses and other uses that do not directly support the economic viability of agriculture. Agricultural areas within Solano County are identified within one of 10 geographic regions. Within these regions, uses include both irrigated and dryland farming and grazing activities. Agriculture-related housing is also permitted within areas designated for agriculture to provide farm residences and necessary residences for farm labor housing.
Public Use Designation	
PQP Public/ Quasi-Public	Provides for airports, schools, solid waste facilities, hazardous waste facilities, and other public and quasi-public facilities.

Table LU-5
General Plan Land Use Designations

Designation and Density or Intensity	Description
Residential Designations	
RR Rural Residential 1 du/2.5 ac to 1 du/10 ac	Provides for single-family residences on 2.5- to 10-acre parcels. Clustering is permitted.
TC-R Traditional Community Residential 1–4 du/ac	Recognizes current residential and mixed-use communities located outside agricultural and municipal service areas where previous development has occurred at higher densities or intensities than currently allowed under County policy. The Traditional Community designation is intended to preserve and enhance the character and quality of these communities but is not to be applied to areas where the area of the residential community is anticipated to expand. Within Traditional Community residential areas, future infill residential and mixed-use development may occur.
TC-M Traditional Community Mixed Use 1–4 du/ac 0.25 FAR	Two categories of Traditional Community are established: (1) exclusively residential (e.g., Green Valley, Rockville, Willotta Oaks, Collinsville, and unincorporated areas within Vallejo and Fairfield); and (2) mixed-use residential and commercial communities (e.g., Old Town Cordelia, Elmira, and Birds Landing).
UR Urban Residential 2–25 du/ac	Provides for urban densities of residential development within municipal service areas. These areas are intended to be annexed and developed by cities with the necessary services and facilities to support development at urban densities. (Note: Exceptions are the unincorporated Vallejo and Vacaville areas with urban services.) The density range provided to the left is approximate based on Solano County city general plans. Refer to the appropriate city general plan for the specific applicable density range.
Commercial Designations	
NC Neighborhood Commercial 0–0.3 FAR	Provides basic daily services for surrounding rural communities—primarily convenience goods and personal services. Neighborhood Commercial areas are designed and situated to minimize traffic congestion and impacts on surrounding lands.

Table LU-5
General Plan Land Use Designations

Designation and Density or Intensity	Description
NAC Neighborhood Agricultural/ Tourist Center 0-0.3 FAR	Provides for areas supporting complementary agricultural and tourism commercial facilities that are compatible with surrounding agricultural uses. In addition, permitted uses should enhance the agricultural character of surrounding areas, develop brand recognition, and create a destination for tourists. Permitted uses include small hotels, restaurants, retail shops, and facilities for the sale of local produce.
CR Commercial Recreation 0-0.3 FAR	Provides for privately owned recreational facilities, including campgrounds, special occupancy vehicle parks, floating home communities, golf courses, and recreational boat marinas. Complementary commercial facilities are also allowed with the primary use including restaurants, commercial lodging, retail shops, boat sales, boat launching ramps, and facilities for boat construction and repair.
SC Service Commercial 0-0.5 FAR	Provides service activities requiring large land areas and easy access to major transportation facilities. Commercial service uses include indoor and outdoor retail and service activities.
HC Highway Commercial 0-0.3 FAR	Designates areas adjacent or in close proximity to selected freeway interchanges to provide necessary retail activities for highway travelers. Typical uses consist of automobile services and repair stations, hotels, motels, restaurants, and refreshment stands.
UC Urban Commercial 0-0.5 FAR	Provides for retail and nonretail commercial areas within cities' municipal service areas. Uses include retail and business and professional offices. The densities provided to the left are approximate ranges found within Solano County city general plans. Refer to the appropriate city general plan for specific applicable commercial designations and FAR range.
Industrial Designations	
GI General Industrial 0-0.3 FAR	Provides for labor- and/or traffic-intensive industries that require large sites for both indoor and outdoor operations. Such uses include manufacturing, processing, disassembling and assembling, and storage of products and materials. This designation is applied to areas with a reasonable degree of separation from residential and agricultural uses and where necessary services can be provided. Limited industrial uses are also permitted in these areas. Such uses include industrial operations, large-scale administrative facilities, scientific and research institutions, warehousing and distribution, and specialized light manufacturing and assembly operations with few or no

Table LU-5
General Plan Land Use Designations

Designation and Density or Intensity	Description
	<p>off-site effects. Outdoor storage and activities associated with the primary use are also permitted. Industrial park development should be focused within city industrial areas.</p> <p>Also allows service activities that support industrial uses and require large land areas and easy access to major transportation facilities. These include supportive retail and other service activities.</p>
LI Limited Industrial 0-0.3 FAR	<p>Provides for industrial operations of a relatively low intensity and low polluting character. Such uses include industrial operations, scientific and research institutions, warehousing and distribution, and specialized light manufacturing and assembly operations with few or no off-site effects. Outdoor storage and activities associated with the primary use are also permitted. Industrial park development should be focused within city industrial areas.</p> <p>Also allows industrial-supporting service activities requiring large land areas and easy access to major transportation facilities. These uses include supportive retail and service activities.</p> <p>Where this designation is applied to the area northeast of Dixon, uses shall be related to agriculture. Permitted uses would include agricultural services such as the storage or sales of products for commercial agriculture, agricultural processing, and corporation yards for the storage and maintenance of agricultural equipment. To the extent that the City of Dixon designates lands suitable for these purposes, the amount of Limited Industrial land designated at this location may be reduced and retained as agriculture. Uses must clearly demonstrate a need for rural locations to serve agricultural uses. These uses should be developed to protect the county's high quality soils and not adversely affect surrounding agricultural uses.</p>
WDI Water Dependent Industrial 0-0.3 FAR	<p>This designation is specifically designed to accommodate water dependent industrial development along the Sacramento River. These are defined as:</p> <ul style="list-style-type: none"> a) Waterfront storage facilities – Ship cargo storage handling facilities immediately contiguous and with a functional relationship to a berthing facility; b) Waterfront manufacturing or processing facilities – Manufacturing or processing operations which require frontage on navigable waters to receive raw materials and/or to distribute processed materials by ship;

Table LU-5
General Plan Land Use Designations

Designation and Density or Intensity	Description
	<p>c) Water-using facilities – Power plants and desalination plants requiring large quantities of water for intake and waste assimilation;</p> <p>d) Support facilities – Uses in addition to those described above which are required to support the operation of a permitted waterfront use; and</p> <p>e) Associated manufacturing or processing uses – Those uses which must be in proximity to a demonstrated water-dependent manufacturing or processing use.</p> <p>Industrial development shall be located and developed in a manner that protects significant marshland and wetland habitats and the water quality of the area. Wetland resources may be enhanced or restored, provided that the viability of the site for industrial development is preserved.</p>
UI Urban Industrial 0–0.3 FAR	<p>Provides for industrial areas within cities' municipal service areas. Uses include both limited and general industrial uses.</p> <p>The densities provided to the left are approximate ranges found within Solano County city general plans. Refer to the appropriate city general plan for specific applicable industrial designations and FAR ranges.</p>
Special Purpose Areas	
JSA Joint Study Area Density and intensity to be determined	<p>The Joint Study Area designation is applied to specific properties within a city's urban growth boundary or planning area. Future development of these properties would occur through city annexation dependent upon an update to the city general plan and amendment to LAFCO's sphere of influence.</p> <p>The Joint Study Area designation applied to the Highway Commercial designation at I-80 / Cherry Glen Road shall be subject to the City of Vacaville completing a General Plan update to include this property by December 31, 2011. If the General Plan update is not completed by December 31, 2011, development of the property may occur through County approval subject to Gateway Design Standards.</p>
SP Specific Project Area Density and intensity vary by project area	<p>Provides for future development after adoption of a specific plan, policy plan, or completion of special plans and studies. This designation is applied to areas where future development and conservation objectives have not been fully defined and will be subject to future planning studies. Planned densities and intensities for each area are assumed for purposes of evaluating the environmental impacts associated with future</p>

Table LU-5
General Plan Land Use Designations

Designation and Density or Intensity	Description
	<p>development of these areas pursuant to implementation of the General Plan.</p> <p>The following areas are identified as Specific Project Areas on the land use diagram:</p> <ul style="list-style-type: none"> ▪ Middle Green Valley – Uses consistent with Residential, Natural Resource, or Agricultural designations. Specific Plan required. ▪ Lambie Industrial Park – Uses consistent with the General Industrial designation. Specific Plan required. ▪ North Vacaville Limited Industrial Area – Uses consistent with the Limited Industrial designation. This area is intended to accommodate large-scale users that cannot be accommodated in city industrial areas and other uses that may not be compatible with city industrial areas. Specific Plan or Policy Plan Overlay required. ▪ Pippo Ranch southwest of the Intersection of Gibson Canyon and Cantelow Roads – Rural Residential. Any future subdivision shall be subject to completion of a master circulation plan and master water service plan based on the development of the property for rural residential use.
UPA Urban Project Area Density and intensity vary by project area	<p>Reflects city-designated master plan, specific plan, or other future plan areas. This designation is applied to these areas to reflect the current city designation for this area. Once specific land uses have been applied to these areas by the cities, the County will amend the General Plan to reflect such changes.</p> <p>These areas include:</p> <ul style="list-style-type: none"> ▪ Rio Vista Army Base Reuse Area ▪ Rio Vista Study Area ▪ Fairfield Train Station Area ▪ Fairfield Nelson Hill
Overlays	
VFS Vacaville-Fairfield-Solano Greenbelt Overlay	<p>Identifies the area of Solano County subject to the Vacaville-Fairfield-Solano Greenbelt Authority agreement. This overlay identifies the area between Vacaville and Fairfield to provide a permanent separation between the urban areas of Fairfield and Vacaville and maintain the area in agriculture and open space uses consistent with the provisions of the agreement.</p>

Table LU-5
General Plan Land Use Designations

Designation and Density or Intensity	Description
TRA Travis Reserve Area	Protects the land within the overlay for continued agriculture, grazing and associated habitat uses until a military or airport use is proposed. No residential uses will be permitted. Provides for future expansion of Travis Air Force Base and support facilities for the base. If the status of the base changes, the construction of nonmilitary airport and support uses may be permitted.
ARO Agricultural Reserve Overlay	Encourages private landowners to voluntarily participate in agricultural conservation easements. This overlay incorporates current agricultural conservation easements, where feasible, and establishes new methods of acquiring land conservation easements that encourage cooperation by landowners. The overlay district will be established as an agricultural mitigation bank for development projects subject to County and city agricultural mitigation programs. Projects having a significant impact on valued agricultural resources in other areas of the county or participating cities would be able to mitigate this impact by paying in-lieu fees used to purchase agricultural conservation easements from landowners in the overlay area. Conservation easements would be held by the County or relevant land trusts, and the landowner would maintain ownership and management control.
TCO Tri-City/County Cooperative Planning Area	Identifies the area of Solano County subject to the Tri-City and County Cooperative Plan. The cooperative plan is incorporated within the General Plan as a special policy document and the County will defer to the cooperative plan in this area.
RCO Resource Conservation Overlay	Identifies and protects areas of the county with special resource management needs. This designation recognizes the presence of certain important natural resources in the county while maintaining the validity of underlying land use designations. The overlay protects resources by (1) requiring study of potential effects if development is proposed in these locations, and (2) providing mitigation to support urban development in cities. Resources to be protected through this overlay are those identified through technical studies as the highest priority areas within the habitat conservation planning process. Conservation measures used to achieve the County's resource goals vary based on the targeted resource. Removal of a Resource Conservation Overlay from a subject property may be possible through a General Plan amendment.

Notes: du/ac = dwelling units per acre; FAR = floor-area ratio

Four areas are designated as Specific Project Areas. These areas were chosen for this designation because the County anticipates using a specific plan or policy plan to guide the type, location, and density of development in these areas. These four areas are listed in Table LU-6 which shows the current expected estimated build-out of these areas. More specific information on the build-out level of these specific project areas will be available when the specific plans are completed.

Table LU-6
Specific Project Areas

Land Use Categories/ General Plan Designations	Proposed General Plan 2030			
	Acres	Dwelling Units	Population	Nonresidential Square Feet
North Vacaville Limited Industrial Area	266	0	0	405,544
Pippa Ranch	90	18	47	-
Middle Green Valley	1,903	400	1,051	-
Lambie Industrial Park	1,488	-	-	1,296,346
Subtotal Specific Project Areas	3,747	418	1,098	1,701,889

Airport Compatible Land Uses

Solano County contains several locally and regionally important airports. Airports are valuable assets for the movement of people, goods, and for economic development. Along with their benefits, airports have unique land use planning needs. Areas around airports must be developed in a manner that supports continued operation. Airports typically generate noise and light and need airspace for takeoffs and landings. Safety issues around the airport also must be taken into consideration. Airport land use compatibility plans (ALUCPs) help to reduce the potential for land use conflicts between the airports and surrounding uses. State law requires the preparation of ALUCPs that address potential airport and land use conflicts for each public-use and military airport in California. ALUCPs address land use compatibility around airports relative to noise, overflights, safety, and airspace protection. They are not plans for airport development and do not require any changes to current land uses. Rather, state law requires future land use development near airports to be consistent with compatibility criteria included in an ALUCP.

The Solano County Airport Land Use Commission (ALUC) is the agency in Solano County empowered by state law to prepare the ALUCP for airports and heliports in the county. The Solano County ALUC oversees orderly development of airports and adoption of land use measures that minimize public exposure to excessive noise and safety hazards in areas around public airports, to the extent that these areas are not already devoted to incompatible uses.

The Solano County ALUC has adopted plans applicable to all current airports in the county as well as to any new airport or heliport (except private-use facilities) that may be proposed in the future. Plans address current airport facilities located throughout the county, including Nut Tree Airport, Rio Vista Municipal Airport, and Travis Air Force Base (AFB).

State law requires local agencies to modify their general plans and any affected specific plans to be consistent with ALUCPs. A general plan must address compatibility planning issues and avoid direct conflicts with compatibility planning criteria. Solano County zoning regulations restrict heights within defined airport flight obstruction areas, which are defined more broadly for military airports than commercial airports in recognition of the mission of Travis AFB.

Travis Air Force Base

Travis Air Force Base



Travis AFB occupies approximately 7,100 acres of land, with two 11,000-foot runways oriented along the northeast-southwest diagonal away from existing housing developments. Travis AFB is home to the world's largest military airlift unit, the 60th Air Mobility Wing, and the wing's reserve counterpart, the 349th Air Mobility Wing. In 1995, the function of the base was expanded by the addition of air refueling assets from March AFB. The U.S. Department of Defense has been using the site for military operations since the early 1940s.

The public is interested in protecting the viability of Travis AFB, and as a part of that effort, in preventing the introduction of incompatible land uses in the vicinity. This change has arisen largely from two factors. One is a heightened awareness of the economic importance of Travis AFB. Secondly, the large number of military base closures in California in recent years, together with the ongoing program of the federal government to eliminate unneeded military bases throughout the country, has raised community concerns about the future of Travis AFB. In light of these factors, the need to ensure long-term land use compatibility between the base and its environs has become a high community priority.

In June 2002, the Solano County ALUC adopted an updated ALUCP, now called the Travis AFB Land Use Compatibility Plan (Travis LUCP). The Travis LUCP addresses restrictions on residential development using compatibility zones. Figure LU-6 indicates the area in which development must be compatible with the Travis LUCP. Nonresidential development is also addressed by the Travis LUCP according to the number of people per acre and established noise sensitivity of different land uses and activities. Please see the Travis LUCP for additional information governing actions in the compatibility zones.

Nut Tree Airport

The 4,700-foot runway at the Nut Tree Airport accommodates a variety of aircraft, from light aircraft to corporate jets. The airport property is located within the City of Vacaville, approximately two miles northeast of downtown Vacaville in an area of urban expansion.



Nut Tree Airport

The 1988 ALUCP defines compatibility zones in the area around the Nut Tree Airport (Figure LU-6). Potentially incompatible land uses and land use policies are confined to the jurisdictional area of the City of Vacaville. Figure LU-6 indicates the area in which development must be compatible with the Nut Tree Airport LUCP. Please see the Nut Tree Airport LUCP for additional information governing actions in this area.

Rio Vista Municipal Airport

The Rio Vista Municipal Airport at Baumann Field is located along the north side of Baumann Road in the northern portion of Rio Vista.

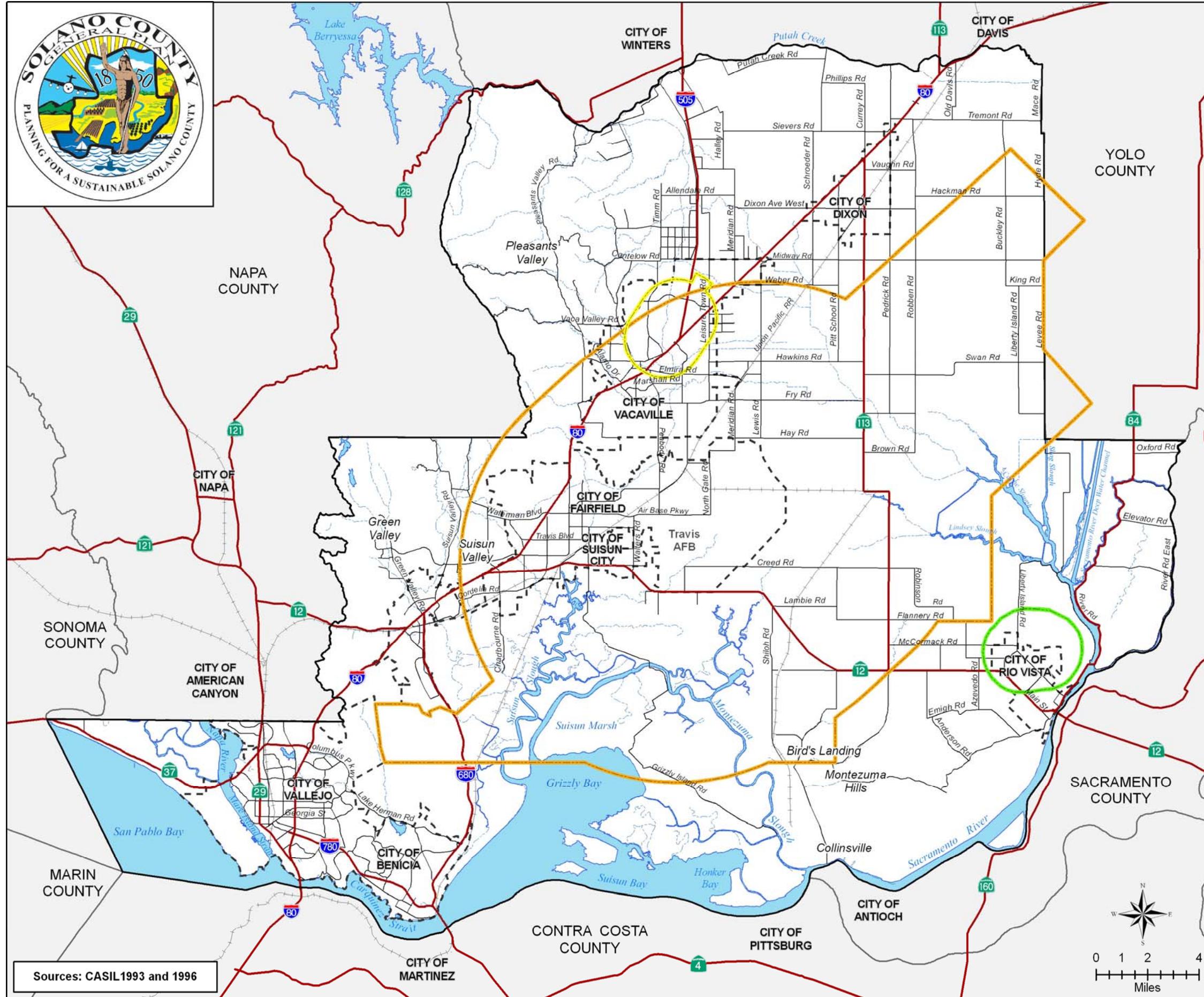


Rio Vista
Municipal Airport

The land use compatibility plan for the Rio Vista Municipal Airport delineates six compatibility zones. Figure LU-6 indicates the area in which development must be compatible with the Rio Vista Municipal Airport LUCP. Please see the Rio Vista Municipal Airport LUCP for additional information governing actions in this area.

Travis Aero Club

The U.S. Air Force established a flight training center at Travis AFB, on the western portion of the property. The Aero Club has recently moved to the Rio Vista Municipal Airport. Recent Air Force Academy graduates, members of the Air Force ROTC, and others can train and rent aircraft at this location. Land use compatibility issues associated with the Travis Aero Club are governed by the land use compatibility plan for the Rio Vista Municipal Airport.



Solano County General Plan
Figure LU-6
Airport Influence Areas

"Planning for a Sustainable Solano County"

Related Plans, Programs, and Agencies

Numerous land use plans, programs and policies are enacted and enforced by state and local agencies. Those that most affect Solano County land use are described below.

Solano LAFCO

Solano LAFCO is responsible for coordinating changes in local governmental boundaries, including city, agency, and special district boundaries and spheres of influence. This includes establishing boundaries and spheres of influence for each city and special district within Solano County. LAFCO's efforts are directed toward seeing that services are provided efficiently and economically while agricultural and open-space lands are protected.

City General Plans

Each of Solano County's seven cities has its own general plan, regulating land use and development within the city's boundaries. These general plans, and the associated land use diagrams, are particularly relevant to areas of the unincorporated county which are adjacent or near city boundaries. During the preparation of the General Plan, and as both the County and city general plans undergo amendments during the life cycle of the plans, coordination and compatibility between the County's plan and the individual city plans remains an important goal. In most cases, the County has deferred to city designations within established city spheres of influence.

Measure A—Orderly Growth Initiative

Solano County's voters adopted Measure A in 1984. The provisions of Measure A were extended with the adoption of the Orderly Growth Initiative, in 1994. The purpose of the initiative is to continue to ensure protection of Solano County's agricultural and open space resources by extending the following provisions:

1. Amending the General Plan to restrict redesignation of lands identified as Agriculture or Open Space on the Land Use and Circulation Map through December 31, 2010; and
2. Amending the General Plan to restrict the density of residential and other development of lands designated Agriculture or Open Space through December 31, 2010, preventing large scale residential or mixed use developments outside of municipal areas.

Under the provisions of the Orderly Growth Initiative, a popular vote is required in order to redesignate Agriculture or Open Space lands to another land use category, or to increase the density of development on designated Agriculture or Open Space lands.

Association of Bay Area Governments

The Association of Bay Area Governments (ABAG) is the regional land use planning agency for the Bay Area, including the counties of Napa, Sonoma, Marin, San Francisco, San Mateo, Santa Clara, Alameda, Contra Costa, and Solano. ABAG is responsible for preparing the Regional Housing Needs Plan allocating regional housing needs through this nine-county area. In addition, as the regional land use planning agency for the Bay Area, ABAG is responsible for describing existing conditions, forecasting changes to the population and economy, and assisting local governments to identify policies that address a changing environment. ABAG prepares demographic and economic projections for the Bay Area on a biennial basis, and supports regional cooperation on issues of development, sustainability, and the environment.

Solano County Zoning Ordinance

The Solano County zoning ordinance provides a precise plan for land use and development standards within Solano County. General Plan land use designations are associated with zoning districts, which include specific requirements, including setbacks, height limits, development standards. The zoning ordinance must be consistent with the General Plan, and so amendments and updates to the General Plan require corresponding zoning ordinance changes.

Area Plans

Area plans may be used to provide a greater planning focus on individual areas of a jurisdiction, within the framework of the overall General Plan. Solano County has adopted two area plans to address areas of potential land use change including:

Collinsville-Montezuma Hills Area Plan and Program

This plan addresses the area around the historic community of Collinsville in the extreme southern portion of the county bordered generally by the Montezuma Slough on the west, Rio Vista on the east, the Sacramento River on the south, and SR 12 on the north. This plan was drafted to analyze the economic, planning, and environmental conditions related to providing for water-dependent industrial development, though this has not occurred to date in this part of the county, despite some development proposals. This plan will be reviewed and updated consistent with the policies and land use proposals developed under the Collinsville Special Study Area.

White Slough Specific Area Plan

This plan was required by the White Slough Protection and Development Act of 1990 to address habitat preservation, transportation improvements, flood protection, public access, land use change, and sewer line relocation. The planning area is bisected by SR 37 and located adjacent and east of the Napa River/Mare Island area. The plan was jointly adopted by the City of Vallejo and Solano County.

Tri-City and County Cooperative Plan for Agriculture and Open Space Preservation

The Tri-City and County Cooperative Plan for Agriculture and Open Space Preservation was adopted by Solano County and the cities of Vallejo, Benicia, and Fairfield in 1994 as part of each jurisdiction's general plan. The plan is intended to guide future land use and park planning for the protection of open space and agricultural resources in an area located south of SR 12 and west of I-680.

GOALS

Two land use strategies are expressed in the General Plan vision statement:

- Promoting city-centered development consistent with longstanding County policy that "*What is urban shall be municipal*"; and
- Sustaining diverse land uses that define the character and identity of Solano County

The goals and policies of the Land Use chapter are intended to provide a framework for the achievement of the vision.

LU.G-1:	Preserve and protect the current development pattern of distinct and identifiable cities and communities.
LU.G-2:	Encourage a development pattern that first seeks to maintain existing communities, second to develop vacant lands within existing communities presently served by public services, and third to develop lands immediately adjacent to existing communities where services can easily be provided.
LU.G-3:	Create sustainable communities with areas for employment, shopping, housing, public facilities and services, and recreation in close proximity to each other.
LU.G-4:	Encourage land use development patterns and circulation and transportation systems that promote health and wellness and minimize adverse effects on agriculture and natural resources, energy consumption, and air quality.

POLICIES

LU.P-1: Collaborate with cities to guide development to the county's urban centers and promote sustainable development patterns.

LU.P-2: A cornerstone principle of this General Plan is the direction of new urban development and growth toward municipal areas. In furtherance of this central goal, the people of Solano County, by initiative measure, have adopted and affirmed the following provisions to assure the continued preservation of those lands designated "Agriculture", "Watershed", "Marsh", "Park & Recreation", or "Water Bodies & Courses"; Land Use policy LU.P-3 and Agricultural policies AG.P-31, AG.P-32, AG.P-33, AG.P-34, AG.P-35, and AG.P-36. The General Plan may be reorganized, and individual goals and policies may be renumbered or reordered in the course of ongoing updates of the General Plan in accord with the requirements of state law, but the provisions enumerated in this paragraph shall continue to be included in the General Plan until December 31, 2028, unless earlier repealed or amended by the voters of the County.

LU.P-3: The designation of specific lands and water bodies as "Agriculture", "Watershed", "Marsh", "Park & Recreation", or "Water Bodies & Courses" on the Solano County Land Use Diagram, adopted by the Solano County Board of Supervisors on December 19, 1980, and as amended subsequently consistent with Proposition A, and the Orderly Growth Initiative, shall remain in effect until December 31, 2028 except lands designated Agriculture may be redesignated pursuant to the procedure specified in Agricultural Policies AG.P-32 through AG.P-36 (providing for re-designation upon the making of specific findings, or as necessary to comply with state law requirements regarding provision of low and very low income housing, or permitting certain re-designations to open space).

In addition, these agricultural and open space lands may also be redesignated after a final judgment by a court of competent jurisdiction determining that the absence of a redesignation would constitute an unauthorized taking of private property or is otherwise unconstitutional, but only to the minimum geographical extent and intensity of use necessary to avoid such unconstitutional result. Any such redesignation shall be designed to carry out the goals and provisions of this policy to the maximum extent possible.

Further, the precise boundaries of land use designations may be subject to minor adjustment and refinement prior to development, or upon request of an affected

landowner, provided such refinements reflect the overall boundaries indicated on the General Plan Land Use Diagram and are consistent with all other General Plan policies, in particular, the General Plan policies prohibiting piecemeal conversions of agricultural lands to non-agricultural uses.

Municipal Service Areas

-
- | | |
|----------|--|
| LU.P-4: | Designate as municipal service areas those areas where future development is to be provided with municipal or urban type services through city annexation. |
| LU.P-5: | Coordinate with cities to oversee development of lands within municipal service areas. |
| LU.P-6: | Retain existing land uses within municipal service areas until annexed to a city. |
| LU.P-7: | Permit temporary land uses and uses consistent with current agricultural zoning on unincorporated lands within municipal service areas that do not conflict with planned land uses until the property is annexed to a city for urban development. |
| LU.P-8: | Encourage the annexation of urbanized unincorporated communities within municipal service areas as long as annexation is not contrary to the wishes of a majority of the affected residents. |
| LU.P-9: | Within the municipal service area in the Peabody Road area where development has already occurred, allow establishment of uses consistent with existing zoning until annexed to the City of Fairfield. |
| LU.P-10: | Within the municipal service areas of the City of Vallejo and the City of Vacaville, allow development within the existing urbanized unincorporated communities under County jurisdiction, consistent with County zoning, where municipal sewer and/or water services are currently available until the communities are annexed to the city. |
| LU.P-11: | Within municipal service areas, work with cities to protect and maintain designated urban-agricultural buffers within city jurisdiction compatible with adjoining agricultural uses. |
| LU.P-12: | Coordinate with Solano LAFCO and the Cities of Suisun City and Fairfield to ensure continued interim use of the Travis Reserve Area for agriculture and grazing lands, and to reserve the area for future expansion of the air force base. If the status of the base changes, the construction of nonmilitary airport and support uses may be permitted. |

Residential Uses

-
- LU.P-13: Provide sufficient residential lands jointly with the cities to meet Solano County's projected housing needs.
 - LU.P-14: Establish rural residential development in a manner that preserves rural character and scenic qualities and protects sensitive resources including agricultural lands, creeks, native trees, open spaces, and views.
 - LU.P-15: Phase future residential development, giving first priority to those undeveloped areas zoned and designated for rural residential use and where rural residential development has already been established; second priority to undeveloped areas designated but not zoned for rural residential use and where rural residential development has already been established; and third priority to those undeveloped areas designated for rural residential use.
 - LU.P-16: Preserve the character and quality of existing Traditional Community areas without expanding these communities further into unincorporated areas.
 - LU.P-17: Encourage clustering of residential development when necessary to preserve agricultural lands, natural resource areas and environmental quality, to provide for the efficient delivery of services and utilities, and to mitigate potential health and safety hazards.
 - LU.P-18: Require a variety of housing types (affordable and market-rate) near jobs, services, transit, and other alternative-transportation serving locations (e.g., rideshare lots).
 - LU.P-19: Increase residential densities in Traditional Communities where new-growth, infill, or reuse opportunities near transit routes or commercial areas exist.

Commercial and Industrial Uses

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- LU.P-20: Provide sufficient commercial and industrial lands jointly with the cities to meet Solano County's projected employment and economic development needs.
 - LU.P-21: Require commercial development to be sited in locations that provide maximum access to the primary consumers of such services and where necessary services and facilities can be provided.
 - LU.P-22: Encourage development of commercial uses to use architecture and site design compatible with the rural character of the surrounding community, the county, and adopted County policies.

- LU.P-23: Locate, design, and site commercial and industrial development, including locations near ferries, rail, and ports, in a manner that minimizes traffic congestion and other negative effects on surrounding residential and agricultural uses.
- LU.P-24: Ensure that commercial and industrial development that occurs adjacent to a city is developed consistent with the development design standards of the adjacent city.
- LU.P-25: Consider the needs of commercial and industrial uses in infrastructure planning decisions.
- LU.P-26: Encourage the location of industrial development in cities that have available labor and necessary facilities and services to support industry.
- LU.P-27: Promote industrial development in the unincorporated county in cases where locating such development near urban areas is not appropriate because of the potential for air pollution, odors, or noise; because such development is related to agriculture; or because the development has other specific unique site requirements that are not feasible or available in cities.
- LU.P-28: Locate and develop industrial uses in a manner that does not conflict with adjacent and surrounding agricultural activities and protects water quality and marshland and wetland habitats.
- LU.P-29: Limit land uses to agriculture-supporting industrial uses in areas located northeast of Dixon that are designated Limited Industrial. Development of this area shall be subject to Development Agreements to address design, drainage and traffic impacts based upon a traffic study conducted for the area. To the extent that the City of Dixon designates lands suitable for these purposes within city limits, the amount of Limited Industrial land designated at this location may be reduced and retained as agriculture.
- LU.P-30: Establish another location within the Fairfield MSA in consultation with the City of Fairfield that can be used to relocate the types of commercial service and industrial uses from the Fairfield Train Station Specific Plan area.

General Land Use Policies

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- LU.P-31: Require that all development within the airport land use compatibility areas/safety zones of the airports complies with the Airport Land Use Commission compatibility policies and criteria as set forth in the airports' land use compatibility plans.

Land Use Chapter

- LU.P-32: Implement land use designations through a compatible zoning ordinance.
- LU.P-33: Ensure that the County's circulation plan is compatible with the land use plan described in this chapter of the General Plan.
- LU.P-34: Promote patterns of development that encourage physical activity to reduce obesity, cardiovascular disease, asthma, diabetes, or injury; and that contribute to a "sense of place" and emotional well-being.
- LU.P-35: Promote land use and design standards that create cleaner air and water and safer streets.
- LU.P-36: Promote land use decisions that reduce injuries (pedestrian, bicycle, and motor vehicle crashes), and provide access to healthy food choices, including locally grown fresh fruits and vegetables throughout the county.
- LU.P-37: Encourage land use patterns and development that will result in fewer and shorter motor vehicle trips, and make transportation choices like transit, biking, or walking more viable alternatives.
- LU.P-38: Assign priority for development countywide to vacant lands where public facilities and services are currently provided.
- LU.P-39: Promote live-work uses for professionals, artists, craftspeople and other low impact employment opportunities in Traditional Community areas as long as such uses are compatible with existing community character.
- LU.P-40: Allow solar energy generation projects in open space areas where consistent with other uses and values.

IMPLEMENTATION PROGRAMS

Regulations

-
- LU.I-1: Update the County Zoning Ordinance and other regulations to incorporate recommended changes in land use designations, provide performance standards for development within each designation and define allowed uses within each designation. Develop and enforce design standards that integrate commercial and industrial development with its surrounding environment. Limit areas northeast of Dixon (identified in Figure LU-7) to

industrial uses that support agriculture. Prohibit "commercial truck stops" on Highway Commercial designated lands adjacent to the Vacaville-Dixon Greenbelt.

Related Policies:

LU.P-14, LU.P-16, LU.P-18, LU.P-19, LU.P-21, LU.P-22, LU.P-23, LU.P-25, LU.P-24, LU.P-26, LU.P-27, LU.P-28, LU.P-29, LU.P-30, LU.P-32, LU.P-33, LU.P-34, LU.P-35, LU.P-36, LU.P-37, LU.P-38, LU.P-37, LU.P-38, LU.P-39, LU.P-40

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Amend by 2011; Ongoing

The Limited Industrial area outside of Dixon, as referenced in Policy LU.P-27.



Figure LU-7
Dixon Limited Industrial Area

Land Use Chapter

LU.I-2: Amend the County zoning ordinance to include development standards consistent with the adopted Airport Land Use Plans.

Related Policies: LU.P-31

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: 2008

LU.I-3: Create and adopt Gateway Design Guidelines in consultation with the cities consistent with adopted commercial and industrial guidelines of each city. These guidelines will be applicable to commercial or industrial uses within the unincorporated county area adjacent to an MSA. The guidelines will be developed concurrently with the proposed update to the County Zoning Ordinance. These guidelines will apply to the following areas:

1. I-505 Specific Project Area north of Vacaville;
2. Limited Industrial uses northeast of Dixon;
3. Highway Commercial uses at I-80 and Midway Rd and I-505 and Midway Rd;
4. Service Commercial and Commercial Recreation uses along Midway Road north of Vacaville;
5. Peabody Road area;
6. Old Town Cordelia; and
7. General Industrial uses adjacent to Rio Vista.

Related Policy: LU.P-24

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Create by 2011, concurrent with zoning update

LU.I-4: Review and update zoning districts consistent with land use designations based on the General Plan/Zoning Consistency Table. (Table LU-7)

Related Policy: LU.P-32

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Amend by 2011; Ongoing

LU.I.5: Incorporate and implement all mitigation measures required by the Environmental Impact Report as found in the Mitigation, Monitoring, and Reporting Program in Appendix D. Report on the progress of this effort annually to the Board of Supervisors.

Related Policies: All

Agency/Department: Department of Resource Management

Funding Source: As indicated in the MMRP

Time Frame: As indicated in the MMRP; Annually

Development Review

LU.I-6: Provide for detailed land planning through the Specific Project Area land use designation and subsequent planning process. Where specific plans and policy plan overlays are required before development in these areas, these plans shall determine:

- resource or hazard areas to be avoided by development;
- techniques to ensure that development is compatible with the character of the surrounding area;
- the amount of land that will be preserved for agriculture and other resources and the methods by which such preservation will be accomplished; and
- plans describing how the proposed development will be provided with adequate levels of water and wastewater service.

The Specific Project Area north of Vacaville (see Figure LU-8) will be subject to a policy plan overlay or specific plan. The intention for this Specific Project Area is to provide space for large scale users that can not be accommodated within city industrial areas and other uses that may not be compatible within city industrial parks consistent with the Limited Industrial designation. Additionally, this plan must include:

1. a 100-foot wide landscaped buffer along I-505 for new uses such that industrial uses or areas are screened from I-505;
2. development requirements to ensure that there are no significant public safety impacts including fire, traffic and emergency medical services;
3. review of alternatives for the provision of water and wastewater in coordination with the City of Vacaville and other agencies; and
4. application of Gateway Design Guidelines to be established by the County (see Program LU.I-3 above).

Prior to preparation of a Specific Plan or Policy Plan, businesses forced to relocate from the Peabody Road area that cannot be relocated within or through annexation to the City of Fairfield and cannot be accommodated in the City of Vacaville may be permitted subject to a development agreement that addresses items 1-4 above.

Related Policies: LU.P-28, SS.P-1 to SS.P-8

Agency/Department: Department of Resource Management

Funding Source: Project Applicant; General Fund

Time Frame: Ongoing

Table LU-7
General Plan / Zoning Consistency Table

General Plan Designations	Existing Zoning Districts															New Districts		New Overlay Districts																	
	P	MP-250	W-160	AL-160	AL-80	A-160	A-80	A-40	A-20	RR-10	RR-5	RR-2½	RE-1	RE-½	RE-⅓	RE-¼	RS-7.5	RS-6	RS-5	RD	RM-1	RM-2	RM-4	CN	CS	CH	MG-3	MG-½	ML	I-W/D	R-TC	R-TCM	CN-AT	CR	RC-O
Natural Resources Designations																																			
Park & Recreation	X	O	O	O	O	O	O	O	O																							X	X		
Marsh		X																																	
Agricultural Designations																																			
Watershed			X																														X	X	
Agriculture				O	O	X	X	X	X																										
Public Designations																																			
Public Quasi-Public				O	O	O	O	O	O																										
Residential Designations																																			
Rural Residential						#	#	#	#	X	X	X	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	#	#			
Traditional Community-Residential																																			
Traditional Community-Mixed Use																																			
Urban Residential						#	#	#	#																										
Commercial Designations																																			
Neighborhood Commercial																																			
Neighborhood Agriculture Tourist Center																																			
Commercial Recreation																																			
Service Commercial																																			
Highway Commercial																																			
Urban Commercial						#	#	#	#																										
Industrial Designation																																			
General Industrial																																			
Limited Industrial																																			
Water Dependent Industrial																																			
Urban Industrial																																			
Special Purpose Areas																																			
Specific Project Areas																																			

X - Zoning is consistent with the General Plan.

O - Zoning is consistent if proposed use is found to be consistent with goals, policies and programs of the General Plan.

- Consistent when used as a holding zone in specified areas.

(blank) - Inconsistent

New Districts

R-TC - Residential - Traditional Community

R-TCM - Residential - Traditional Community Mixed Use

CN-AT - Neighborhood Commercial - Agricultural Tourist Centers

CR - Commercial Recreation

New Overlay Districts

RC-O - Resource Conservation Overlay District

H-O - Historic Overlay District

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Figure LU-8
I-505/North Vacaville Specific Project Area

LU.I-7: For Specific Project Areas featuring residential development, require specific plans to specify guidelines for cluster development, including minimum and maximum lot sizes, guidance on placement of units to provide maximum use of the remaining portions of land as agriculture or open space, and development standards.

Related Policy: LUP-17

Agency/Department: Department of Resource Management

Funding Source: Project Applicant; General Fund

Time Frame: Ongoing

LU.I-8: Phase future residential development, giving first priority to those undeveloped areas zoned and designated for rural residential use and where rural residential development has already been established; second priority to undeveloped areas designated but not zoned for rural residential use and where rural residential development has already been established; and third priority to those undeveloped areas designated for rural residential

Land Use Chapter

use. Also give priority to lands where public facilities and services are currently provided.

Related Policy: LU.P-15

Agency/Department: Department of Resource Management

Funding Source: Development fees

Time Frame: Ongoing

LU.I-9: Permit redesignation of agricultural or open space-designated land only in accordance with the Orderly Growth Initiative, Policy LU-3.

Related Policy: LU.P-3

Agency/Department: Department of Resource Management

Funding Source: Development fees

Time Frame: Ongoing

LU.I-10: Ensure that development within the airport land use compatibility areas and safety zones of the county's airports complies with noise, height, and safety policies set forth in the airports' land use compatibility plans.

Related Policy: LU.P-31

Agency/Department: Department of Resource Management; Solano County Airport Land Use Commission

Funding Source: Development fees

Time Frame: Ongoing

LU.I-11: When reviewing development proposals, work with applicants to establish development patterns that result in shorter motor vehicle trips, make alternative transit modes viable, and encourage physical activity.

Related Policies: LU.P-34, LU.P-36, LU.P-37, TC.P-4

Agency/Department: Department of Resource Management

Funding Source: General Fund; Development fees

Time Frame: Ongoing

LU.I-12: When reviewing development proposals, work with applicants to achieve project and street designs that create cleaner air and water and safer streets, reducing injuries to pedestrians, bicyclists, and motorists from crashes.

Related Policies: LU.P-35, LU.P-36, TC.P-4

Agency/Department: Department of Resource Management

Funding Source: General Fund; Development fees

Time Frame: Ongoing

Coordination with Other Agencies and Organizations

LU.I-13: Work with the cities and the Solano Local Agency Formation Commission to conform municipal service areas with sphere of influence lines and clearly define those lands that are expected to be urbanized through annexation.

Work with the cities and the Solano Local Agency Formation Commission to clearly define those lands that are expected to be urbanized through annexation. Lands designated for urbanization should support the goal of compact development and maintaining agricultural lands in agricultural use.

Continue to focus most development within incorporated areas through collaboration with the cities and the Solano Local Agency Formation Commission, municipal service agreements, sphere of influence agreements, and other local agreements.

Related Policies: LU.P-1, LU.P-2, LU.P-3, LU.P-4, LU.P-5, LU.P-8, LU.P-12, LU.P-13, LU.P-20

Agency/Department: Department of Resource Management; Solano LACFO; Cities

Funding Source: General Fund

Time Frame: Ongoing

Land Use Chapter

LU.I-14:	Continue to provide cities the opportunity to review, comment on, and coordinate land use proposals and decisions within a city's municipal service area and surrounding areas.
Related Policies:	LU.P-6, LU.P-7, LU.P-9, LU.P-10
Agency/Department:	Department of Resource Management; Cities
Funding Source:	Development fees; General Fund
Time Frame:	Ongoing
LU.I-15:	Review land use updates and amendments to city general plans and consider amending County land use classifications and municipal service areas to incorporate city land use changes as appropriate.
Related Policies:	LU.P-5, LU.P-7, LU.P-9
Agency/Department:	Department of Resource Management
Funding Source:	General Fund
Time Frame:	Ongoing
LU.I-16:	Work with cities to protect and maintain designated urban-agricultural buffers within their jurisdictions compatible with adjoining agriculture uses.
Related Policy:	LU.P-11
Agency/Department:	Department of Resource Management; Agriculture Commissioner; Solano County cities
Funding Source:	General Fund
Time Frame:	Ongoing

LU.I-17:	Work with cities and the Solano Local Agency Formation Commission to ensure interim use of the Travis Reserve Area as agriculture and grazing lands, and to reserve sufficient land within the Reserve to accommodate future expansion of the air force base and support facilities or commercial aviation use.
Related Policy:	LU.P-12
Agency/Department:	Department of Resource Management; Travis Air Force Base; Solano County Airport Land Use Commission; Solano LAFCO; cities
Funding Source:	General Fund
Time Frame:	Ongoing
LU.I-18:	Work with cities to ensure that sufficient land is designated for residential, commercial, and industrial uses to meet the county's projected housing, employment, and economic development needs.
Related Policies:	LU.P-13, LU.P-20, LU.P-38
Agency/Department:	Department of Resource Management
Funding Source:	General Fund
Time Frame:	Ongoing
LU.I-19:	Coordinate with the Metropolitan Transportation Commission, Solano Transportation Authority and the California Department of Transportation to ensure that transportation planning and improvement programs are consistent with this chapter.
Related Policy:	LU.P-33
Agency/Department:	Department of Resource Management
Funding Source:	General Fund
Time Frame:	Ongoing

"Planning for a Sustainable Solano County"

SPECIAL STUDY AREAS

As part of the General Plan update process, special community participation programs were conducted in four special study areas. These four areas (Middle Green Valley, Suisun Valley, Old Town Cordelia, and Collinsville) face unique planning issues. The process of planning for special study areas focused attention on each area's particular issues and concerns. Goals and policies were established for each area based on the input from the community.



Facilitated discussions helped community members reach agreement on special study area land use alternatives.

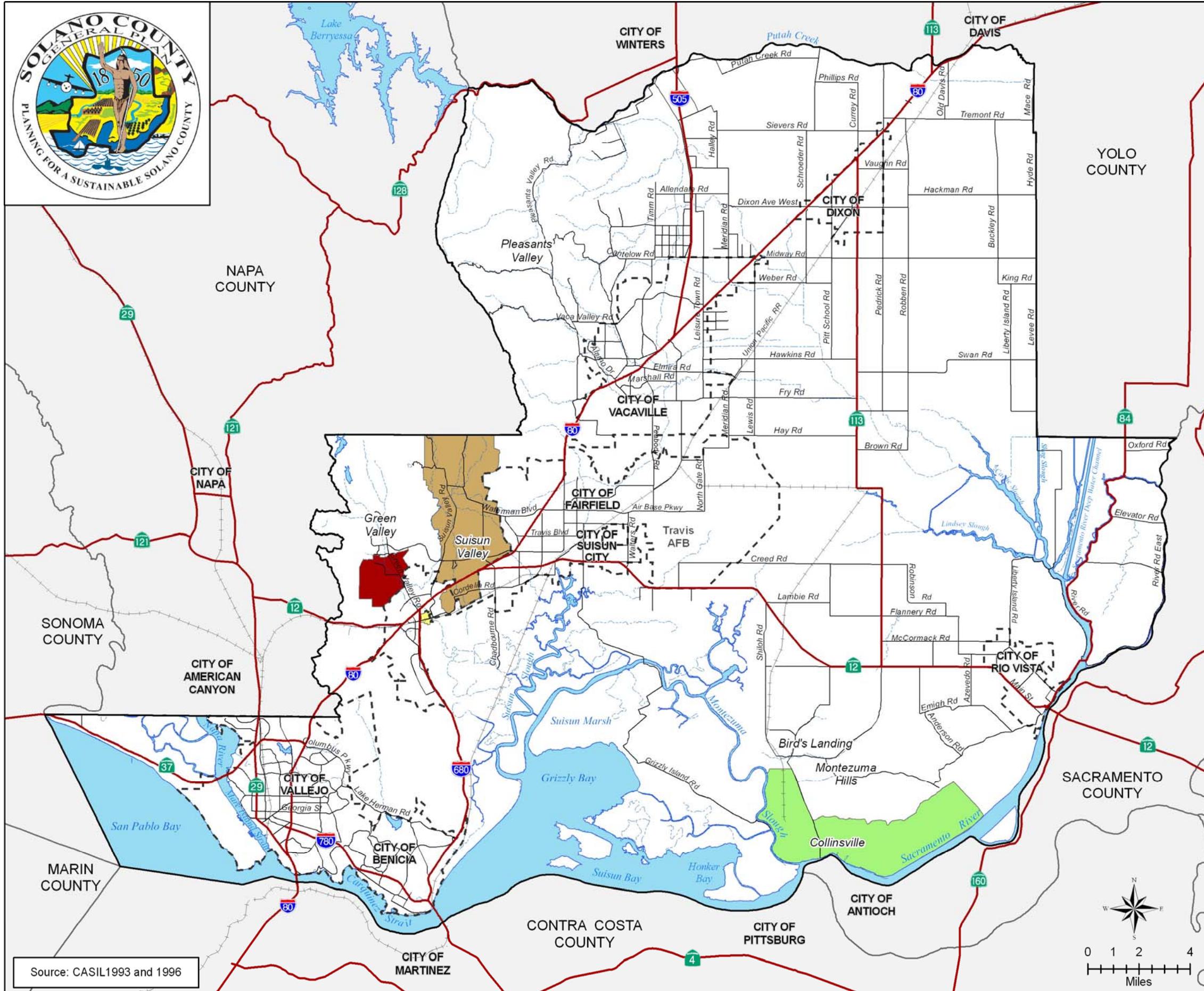
A brief discussion of the planning issues, community involvement process, General Plan outcomes, and goals and policies follows for each special study area. The goals and policies associated with each area—including those that pertain to issues discussed in other chapters of the plan—are included below. In some cases, policies developed for one of the special study areas were adopted for the county as a whole. In these cases, the special study area policies are presented below, and similar or identical policies applying to the county as a whole appear elsewhere in the General Plan.

Middle Green Valley

The Middle Green Valley area is located north of the Fairfield city limits along Green Valley Road. As shown on Figure SS-1, it is nestled on the edge of the western hills with a mixture of cultivated agricultural land on the valley floor and grazing land in the hills, sandwiched between residential developments in upper Green Valley and the city of Fairfield. The area is valued for its rural character and scenic qualities.

Community Involvement Process

Six public workshops were held during the spring and summer of 2007 as part of a resident-driven planning process for the Middle Green Valley Special Study Area. During the six workshops, input from residents was used to develop goals and policies, and draft land use plans. These items were subsequently reviewed with the Citizens' Advisory Committee, Planning Commission and the Board of Supervisors.



Solano County General Plan

Figure SS-1

Special Study Area Locations

Legend

- Special Study Areas (SSAs)**

 - Collinsville
 - Middle Green Valley
 - Old Town Cordelia
 - Suisun Valley

Basemap Layers

 - Roadways
 - Highways
 - +-- Railroads
 - Streams and Creeks
 - Major Water Features
 - Municipal Service Area
 - Adjacent Counties

"Planning for a Sustainable Solano County"

Middle Green Valley Plan

In Middle Green Valley, the community process focused on finding a solution that would resolve several issues, including maintaining character, serving development with water and wastewater services, protecting resources, and keeping agriculture viable while deciding how or whether to grow and maintaining equality among landowners and residents.

Character

Starting at the first meeting, many people discussed how important it was to maintain the unique character of Middle Green Valley. This was later called "rural" character. There seemed to be a general consensus that the valley's character should be maintained and much of the discussion focused on what this rural character was and what steps should be taken to protect it.

Water and Wastewater

At many of the meetings, water and sewer issues were discussed. There was a general concern regarding whether new development would be served by wells and septic systems or whether new development would be served by public water and sewer services. The capacity and suitability of on-site water and septic systems versus public water and wastewater systems was also discussed.

Resource Conservation/Protection

Many attendees considered Middle Green Valley to be rich in resources and, if additional development were to be considered, they wanted to ensure that some resources would be protected. Resources sited as important to the community included habitat areas, views of the hills and agricultural land in the valley, good farming soil, and water.

Viability of Agriculture

Another issue discussed throughout the process was the viability of farming and ranching in the Middle Green Valley area. Comments were made regarding the quality of farmland, the ability of producing economically sustainable yields of crops, and how to aid farmers to continue farming.

How to Grow

Many of the issues brought up by attendees included the question of whether Middle Green Valley should accommodate more development and how much development. Opinions ranged widely, with some participants commenting that Middle Green Valley is a logical place for the county to grow while others commenting that the valley is a special area and should have no additional growth.

Property Rights and Equal Treatment

Another issue that was discussed throughout the process was landowners' property rights, equitable consideration of those rights, and their expectations of the County. Comments were made on how important it was to some that they be allowed to develop while others felt that increased development was not a right. Another set of comments asked

that all landowners in the study area be treated equally if land use designations are changed.

Middle Green Valley Land Use Plan

The goal of the special study area outcome was to maintain the rural character of Middle Green Valley while allowing some opportunities for compatible residential development. Land use tools such as clustering and transfer of development rights will be used to limit the effects of residential development on the rural character of the valley, including viewsheds, wildlife habitat and corridors, and agricultural activities. Figure SS-2 illustrates the land use diagram for Middle Green Valley. Middle Green Valley is designated as a Specific Project Area on the Land Use diagram. Figure SS-3 shows the proposed approximate sending and receiving areas for Middle Green Valley, using a Transfer of Development Rights program. As described in Implementation program SS.I-1, a future specific plan will be developed to refine the preferred plan for the area.

Goal and Policies

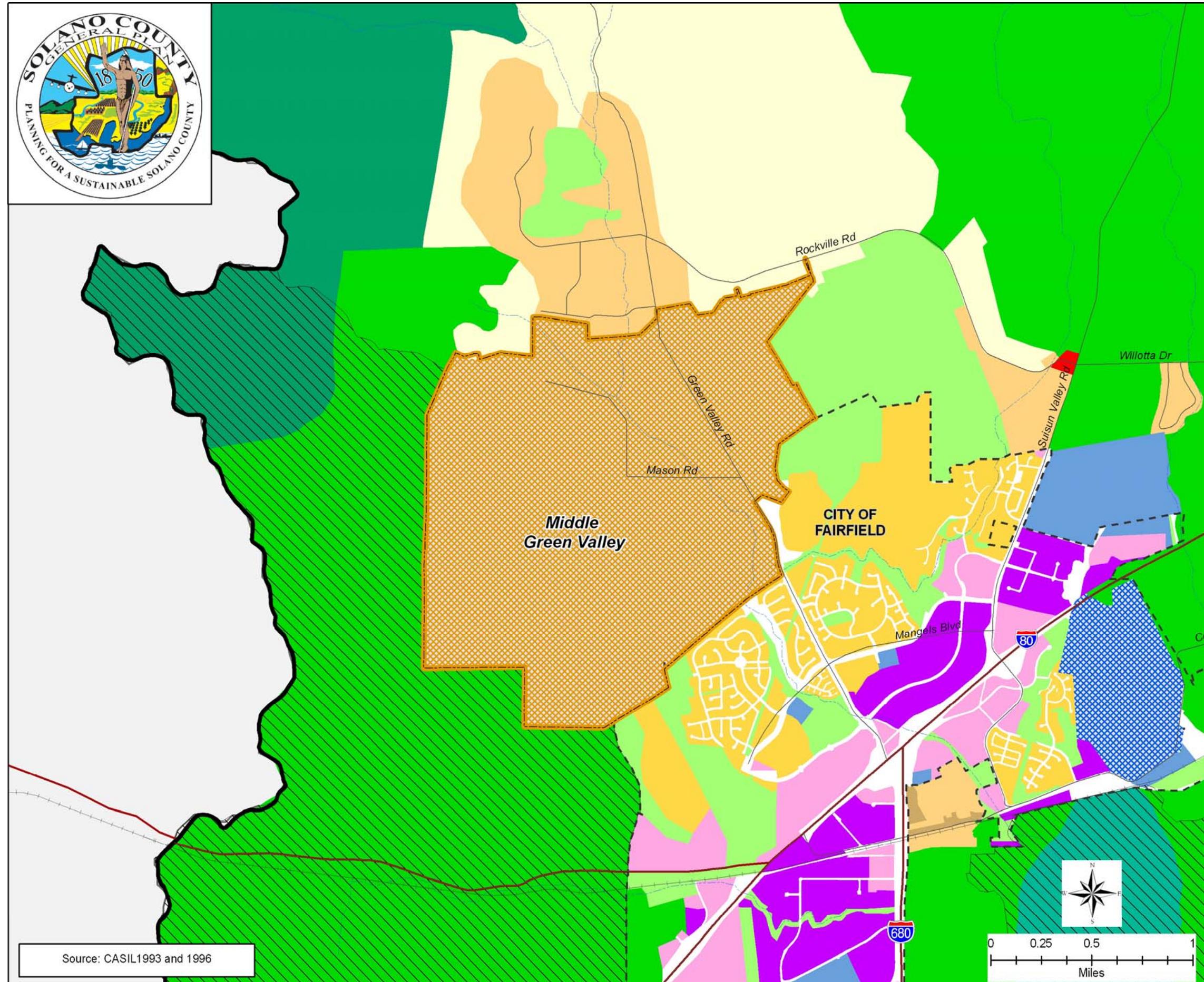
A goal and policies were developed based on the community vision for Middle Green Valley. The goal and policies provide a framework for implementing the future vision of a rural community with compatible residential development.

Goal

-
- SS.G-1: Protect and maintain the rural character of Middle Green Valley while allowing opportunities for compatible residential development to occur.**

Policies

-
- SS.P-1: Maintain the rural character of Middle Green Valley while still allowing development to be guided into areas screened from Green Valley Road because of natural contours in the land, woodland vegetation, and/or riparian vegetation. Locate upland development in areas screened by landforms or vegetation.
- SS.P-2: Balance the protection of resources in Middle Green Valley (e.g. view sheds, oak woodlands, riparian habitat, sustainable agricultural use) while allowing development to occur.
- SS.P-3: Allow for the migration and movement of wildlife.
- SS.P-4: Provide a variety of incentives and techniques to encourage property owners to preserve natural and visual resources, in addition to the transfer of development rights.
- SS.P-5: Encourage cluster residential development through incentives to property owners in hillside and valley floor areas that can support residential uses with least affect on resources, steep slopes, or very high wildfire hazard areas.



Solano County General Plan
Figure SS-2
Middle Green Valley SSA
Land Use Diagram

Legend

Middle Green Valley SSA

General Plan Land Use Designations

Natural Resource Designations

Park and Recreation

Marsh

Agricultural Designations

Watershed

Agriculture

Public Designations

Public/Quasi-Public

Residential Designations

Rural Residential

Traditional Community - Residential

Traditional Community - Mixed Use

Urban Residential

Commercial Designations

Neighborhood Commercial

Urban Commercial

Industrial Designations

Urban Industrial

Special Purpose Areas

Specific Project Area

Urban Project Area

Overlays

Resource Conservation Overlay

Basemap Layers

Roadways

Highways

Railroads

Streams and Creeks

Major Water Features

Municipal Service Areas

Adjacent Counties

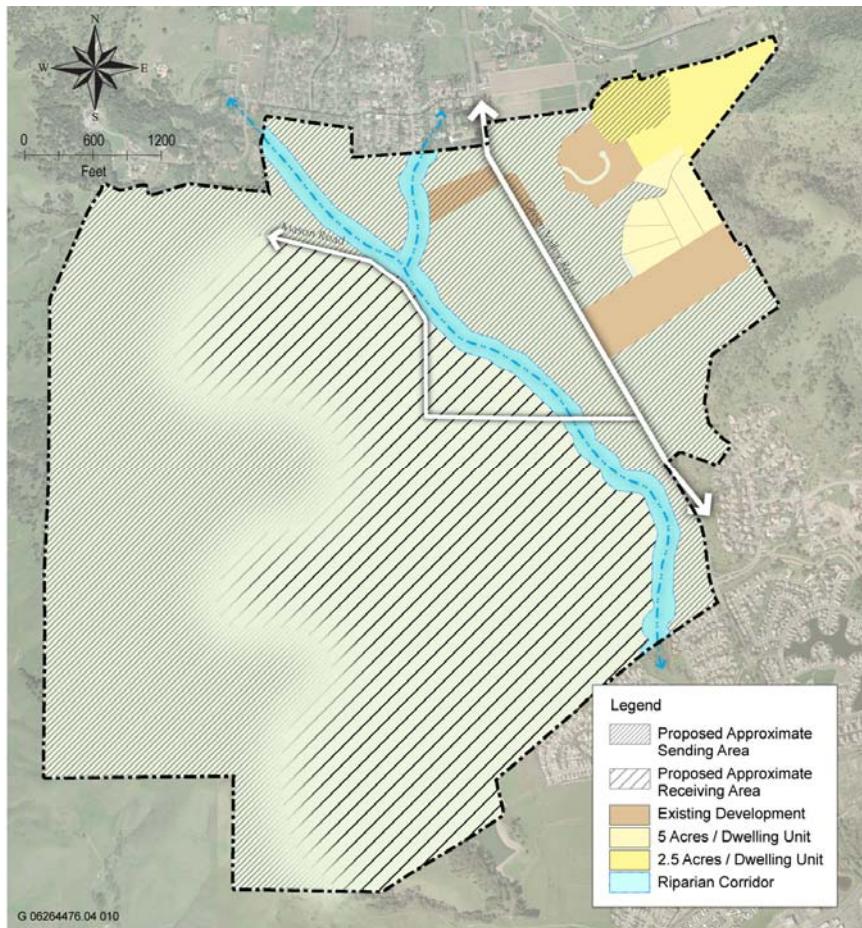


Figure SS-3
Middle Green Valley Conceptual Land Use Plan

- SS.P-6: In accordance with balancing the protection of resources described in these policies, adopt a program that provides residential development credits to property owners who voluntarily forego or limit development on their lands. The transfer of development rights program should focus incentives on land in areas to be preserved.
- SS.P-7: Adopt a specific plan or master plan to implement these policies for Middle Green Valley.
- SS.P-8: Create additional methods to assist landowners who choose to continue farming, such as, but not limited to:
- enforcing the right-to-farm act and educating residents on the act; and
 - investigating mechanisms for providing farmers with economic assistance to ensure agricultural viability.

Implementation Programs

Regulations

- SS.I-1: Adopt a plan (either a specific plan or master plan) to implement these policies for Middle Green Valley. That plan should specify:
- the area covered by the plan;
 - techniques to ensure development is compatible with the rural character of Middle Green Valley and surrounding areas. Such techniques should include design guidelines and development standards;
 - guidelines for cluster development, including minimum and maximum lot sizes, development standards, and density bonus credits for clustered development;
 - the details of a transfer of development rights program (with an implementing ordinance), including: the designation of areas where development is preferred, creating appropriate and equitable re-zoning, clustering of housing, and determining the ratio of credits to property owners who voluntarily forego development;
 - the number of units and/or credits, with or without clustering, that will provide incentives for all landowners in the area to participate in a market driven transfer of development rights program, based on 400 units, subject to further study;
 - the location and dimensions of a wildlife corridor ("green corridor");
 - the maximum number of units any property owner can develop, with or without clustering;
 - the techniques to be applied voluntarily by property owners that ensure permanent protection and maintenance of resources/views on lands to remain undeveloped; and
 - the details of how the development would be served with water and wastewater service. Attempt to secure public water and wastewater service through a cooperative effort of property owners, residents, the County, and the City of Fairfield.

Property owners shall receive a minimum development credit for the number of primary dwelling units that would be allowed under the land use designations under the 1980 General Plan. For land designated as Agriculture, the number of units/credits would be one per 20 acres and for land designated Rural Residential the number of units/credits would be one per 5 acres.

Related Policies: SS.P-1, SS.P-2, SS.P-3, SS.P-4, SS.P-5, SS.P-6, SS.P-7, SS.P-8

Agency/Department: Department of Resource Management

Funding Source: General Fund; Grant funds

Time Frame: Initiate Specific Plan process January 2009

SS.I-2: Establish a Middle Green Valley Citizens Advisory Committee.

Related Policies SS.P-1, SS.P-2, SS.P-3, SS.P-4, SS.P-5, SS.P-6, SS.P-7, SS.P-8

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: September 2008

Suisun Valley

Suisun Valley is located between of Fairfield and Cordelia, east of the Napa Hills, and south of the Napa County border (see Figure SS-1). Most land in this area is in agricultural use, producing grapes for wine, small grains, or other fruit crops. Three intersections in this area contain commercial establishments: Mankas Corners, Rockville Corners, and Rockville Road/I-80.

Limited tourism-supporting commercial uses (such as restaurants galleries, and wine tasting rooms) currently exist in the area. The majority of land in this area is currently under Williamson Act contracts, and falls under the County's Orderly Growth Initiative, restricting land use changes for agriculturally-designated lands. Based on the growth controls and Williamson Act conditions, there is limited potential for the wineries to include ancillary tourism-related uses on their properties.

Community Involvement Process

Five community meetings were held during the spring and summer of 2007 as part of a resident-driven planning process for the Suisun Valley Special Study Area. During the five workshops, resident input was used to develop goals, policies, and draft land use plans. These items were subsequently reviewed with the Citizens' Advisory Committee, Planning Commission and the Board of Supervisors. In addition, goals and policies developed for the Suisun Valley area were incorporated into the Agriculture chapter to be applied in several additional Solano County agricultural regions. The main issues discussed during these meetings were maintaining agricultural character, improving agricultural production and income, the creation of agricultural tourist centers, and providing infrastructure to support proposed uses.

Maintain Agricultural Character

From the first workshop forward, residents expressed a strong desire to maintain the agricultural character of the valley. Participants thought that appropriate zoning and prevention of incompatible uses were important in achieving this goal. Many residents wanted a vision for the character of the area to be created. Farmers in the valley stated that a viable agricultural economy was critical to the success of this goal.

Improve Agricultural Production/Income

A variety of comments addressed the need to help agriculture and agriculture-related businesses become more profitable. Emphasis was placed on the County's role in reducing barriers that currently prevent farms from being more profitable. Primary among these comments was a desire to process crops grown off-site into finished products. Participants felt that agricultural processing should be allowed whether the ingredients were grown on the property or grown elsewhere. Participants also expressed an opinion that processing should be allowed without a conditional use permit. Some participants wanted the County to initiate economic programs for farming such as low-interest financing.

Agricultural Tourist Centers

There was significant agreement among the group that agricultural tourism would be critical to the future viability of agriculture in the valley. Participants requested that additional uses be allowed on lands designated for agriculture. Participants also agreed that the creation of small tourist-oriented centers within the valley would help attract tourists and provide additional opportunities to market local products.

Infrastructure

Participants expressed concern that infrastructure in Suisun Valley is not adequate in its current state and would need to be improved before increased numbers of tourists could be accommodated. Participants stated that roads in the valley do not adequately support agricultural truck traffic. Additionally, Abernathy Road was identified as subject to frequent flooding. Concern about increases in traffic on valley roads that would accompany tourism was also raised.

Suisun Valley Land Use Plan

Vintage Café at Manka's Corner in the Suisun Valley.



Suisun Valley will serve as a destination for those visitors interested in local wine production and local produce. Commercial land use designations are expanded in several Neighborhood Agricultural Centers in Suisun Valley. These Neighborhood Agricultural Centers will allow for additional commercial uses in eight areas: Mankas Corner, Rockville Corner, Morrison Road, Gomer School, Rockville Road east of Abernathy Road, North Connector at

Abernathy Road, Iwama Market, and Cordelia Road at Thomasson Lane. Even with these changes in designation, additional commercial development will be limited based on the number of parcels with Williamson Act contracts. Figure SS-4, the Suisun Valley Land Use Diagram, illustrates the location of these Neighborhood Activity Centers with asterisks. Outside of the Neighborhood Activity Centers, the Suisun Valley is designated for agricultural use, pursuant to standards established in the Agriculture chapter.

Agricultural land in Suisun Valley



Goal and Policies

A goal and policies were developed based on the community vision for Suisun Valley. The goal and policies provide a framework for implementing the future vision of a string of Neighborhood Agricultural Centers in a rural agricultural community.

Goal

- SS.G-2:** **Preserve and enhance the landscape and economy of the Suisun Valley as a rural agricultural community.**

Policies

- SS.P-9: Preserve agricultural production as the principal use of the Valley's farmlands.
- SS.P-10: Establish neighborhood agricultural centers that expand agri-tourism in the Valley.
- SS.P-11: Ensure that future development fits the scale of the Valley's rural and agricultural context.
- SS.P-12: Limit minimum agricultural parcel sizes in the Suisun Valley to encourage viable agricultural and ranching use. New

Land Use Chapter

parcels shall not be created which are smaller than 20 acres in size.

- SS.P-13: Allow farms and vineyards to process, store, bottle, can, package, and sell products produced both on-site and off-site.
- SS.P-14: Support programs that promote the branding and identity of Suisun Valley products.
- SS.P-15: Streamline permit processing for agricultural uses.
- SS.P-16: Develop design guidelines to promote community character and facilitate tourism within neighborhood agricultural/tourist centers.
- SS.P-17: Explore infrastructure alternatives for individual agricultural neighborhood centers in order to accommodate new commercial and tourist uses.
- SS.P-18: Work with local residents to find a suitable location for a public gathering place for community activities, including farmer's markets and seasonal festivals.

Implementation Programs

Regulations

-
- SS.I-3: Preserve agricultural production as the principal use of the Valley's farmlands using such tools as minimum parcel sizes, establishment of neighborhood agricultural centers, and streamlined permit processing.

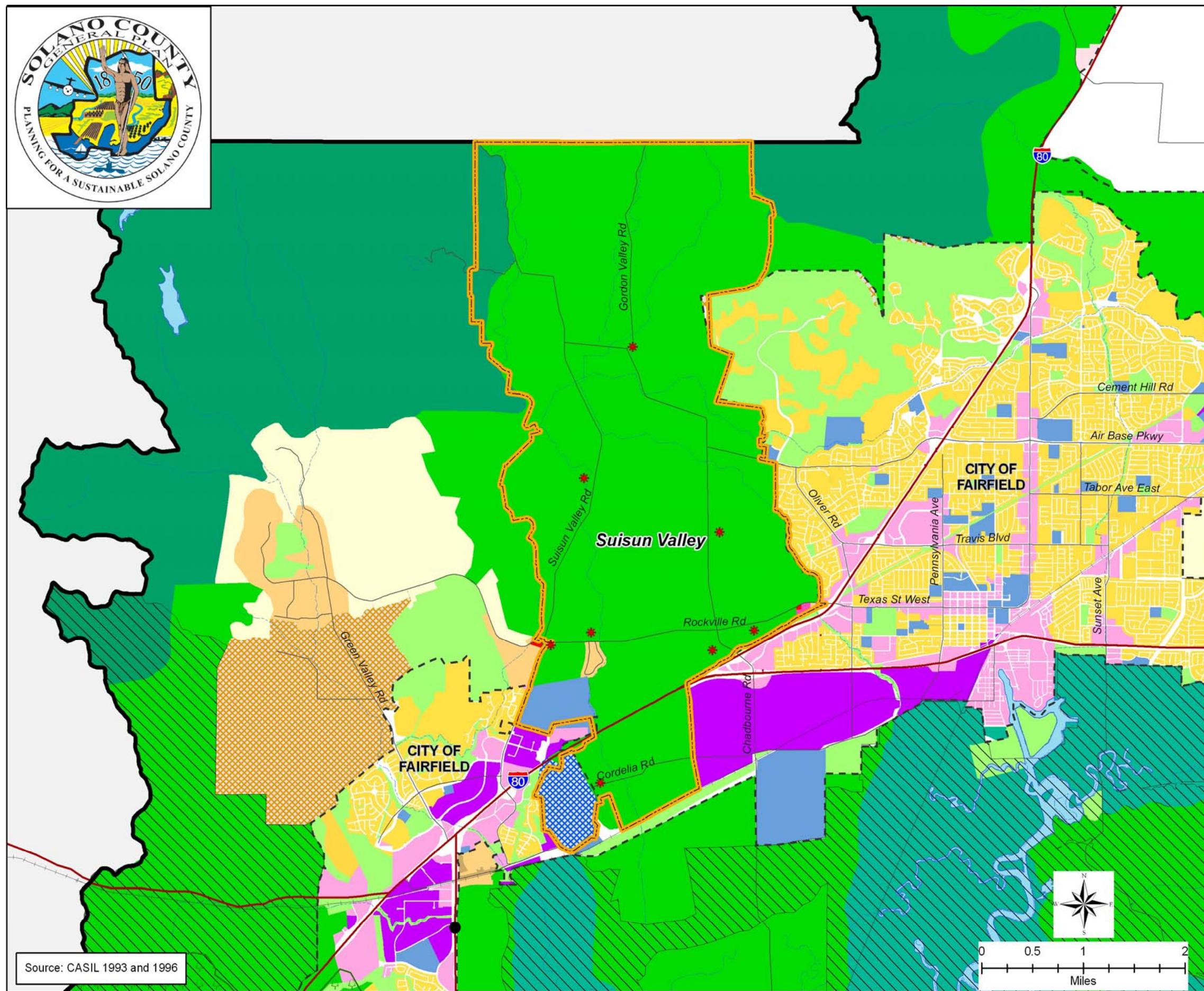
Related Policies: SS.P-9, SS.P-10, SS.P-12, SS.P-15

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

-
- SS.I-4: Use zoning and development standards to ensure that future development fits the scale of the Valley's rural and agricultural context. Update the County Zoning Ordinance to incorporate and codify the desired uses identified in Table LU-4. Enact zoning and development standards allowing farms and vineyards to process, store, bottle, can, package, and sell products produced both on-site and off-site. Develop design guidelines to promote community character and facilitate tourism within neighborhood agricultural centers.



Solano County General Plan
Figure SS-4
Suisun Valley SSA
Land Use Diagram

Legend

- Suisun Valley SSA
- General Plan Land Use Designations
- Natural Resource Designations
 - Water Bodies and Courses
 - Park and Recreation
 - Marsh
- Agricultural Designations
 - Watershed
 - Agriculture
- Public Designations
 - Public/Quasi-Public
- Residential Designations
 - Rural Residential
 - Traditional Community - Residential
 - Traditional Community - Mixed Use
 - Urban Residential
- Commercial Designations
 - Neighborhood Agricultural/Tourist Center
 - Service Commercial
 - Highway Commercial
 - Urban Commercial
- Industrial Designations
 - General Industrial
 - Urban Industrial
- Special Purpose Areas
 - Specific Project Areas
- Overlays
 - Tri-City/County Cooperative Planning Area
 - Resource Conservation Overlay
- Basemap Layers
 - Roadways
 - Highways
 - Railroads
 - Streams and Creeks
 - Major Water Features
- Municipal Service Areas
- Adjacent Counties

"Planning for a Sustainable Solano County"

Related Policies: SS.P-11, SS.P-13, SS.P-16

Agency/Department: Department of Resource Management

Funding Source: General Fund; Suisun Valley Fund

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach, and Education

SS.I-5: As part of the County's economic development program, support programs that promote the branding and identity of Suisun Valley products.

Related Policy: SS.P-14

Agency/Department: Department of Resource Management

Funding Source: Suisun Valley Fund

Time Frame: Ongoing

SS.I-6: Work with local residents to find a suitable location for a public gathering place for community activities, including farmers' markets and seasonal festivals. Explore infrastructure alternatives for individual agricultural neighborhood centers to accommodate new commercial and tourist uses.

Related Policies: SS.P-17, SS.P-18

Agency/Department: Department of Resource Management

Funding Source: Suisun Valley Fund

Time Frame: Ongoing

Desired Uses

Table LU-8 summarizes desired uses within Suisun Valley land use designations. The summary is intended to provide an understanding of the range and type of uses that are provided for within each land use designation. Table LU-4 is not meant to identify all permitted uses, conditionally permitted uses, or prohibited uses within each proposed designation. A complete list of permitted and conditionally permitted uses will be incorporated in the updated Zoning Ordinance, as described in Program SS.I-3.

Table LU-8
Desired Uses in the Suisun Valley Special Study Area

Allowed Uses	Agriculture-Suisun Valley Region	Neighborhood Agricultural/Tourism Center
Agricultural Land Uses		
Crop production, including orchards and vineyards	▲	▲
Agricultural accessory structures	▲	▲
Agricultural processing facilities	▲	▲
Animal facilities and operations		
Grazing	▲	▲
Stable, private	▲	▲
Wind turbine generators, noncommercial (over 100 feet)	▲	
Storage/maintenance of agricultural equipment/supplies	▲	▲
Tourism Uses		
Roadside stands	▲	▲
Restaurant/café	#	▲
Bakery	#	▲
Winery and tasting facilities	#	▲
Local products store*		▲
Bed and breakfast (≤ 10 rooms)	#	▲
Hotel (≤ 30 rooms)		▲
Resort	•	
Gallery	#	▲
Commercial and Service Uses		
Agricultural trucking services and facilities		**
Service station		**
Nursery	▲	
Farm/ranch supply store		▲
Storage/sale of agricultural service products (fertilizer, fuel)	▲	▲
Custom farm services (e.g., hay baling)	▲	
Farm equipment fabrication and repair	▲	**
Farm equipment sales		**
Residential Uses		
Single-family dwelling (and accessory unit)	▲	▲
Agricultural employee housing	▲	▲
Farm labor housing (seasonal labor camp)	▲	
Home-based businesses	▲	▲
Recreation, Education, and Public Assembly Uses		
Agricultural education/demonstration farms	▲	
Special events facilities (e.g., weddings)	▲	▲
Public service facility	▲	▲

Table LU-8
Desired Uses in the Suisun Valley Special Study Area

Allowed Uses	Agriculture—Suisun Valley Region	Neighborhood Agricultural/ Tourism Center
Other Uses		
Cemetery	▲	
Signs—commercial and real estate	▲	▲

- ▲ Indicates use is allowed within land use designation
- * Local products stores are defined as stores that sell food, beverages, textiles, and crafts that are grown, collected, or produced in the local area.
- ** Only allowed in the Neighborhood Agricultural Center located at the North Connector/Abernathy Road near Interstate 80.
- # Allowed as ancillary use to agriculture on same property.
- Subject to discretionary review.

Collinsville

Existing uses in the Collinsville area include energy production and grazing.



The Collinsville Special Study Area includes about 8,500 acres located in the extreme southeastern portion of Solano County. Located south of SR 12 approximately 10 miles southwest of Rio Vista and 15 miles southeast of Travis AFB and Fairfield, Collinsville is bordered on the south and southwest by the Sacramento River and on the west by Montezuma Slough and Suisun Marsh.

Current land uses in Collinsville include natural resources land, utility operations, publicly owned open land, residences, wind farms, and agricultural lands. Dry farming, which rotates between grain and grazing sheep, is the major agricultural practice in this area. Much of the land used for dry farming is also used for production of wind energy.

Pacific Gas and Electric Company and the Sacramento Municipal Utility District both own large tracts of land in the Collinsville area. A cluster of fewer than 20 homes is located in the southern portion of the area along Collinsville Road. Another cluster of homes and businesses serving the local area is located in Birds Landing, at the northern edge of the area, where Collinsville and Birds Landing Roads intersect.

Community Involvement Process

Five public workshops were held to shape the land use plan, including policies and implementation programs for Collinsville. These items were subsequently reviewed with the Citizens' Advisory Committee, Planning Commission and the Board of Supervisors. The issues summarized below were recurring points of discussion that resonated throughout each of the workshops.

Maintain Residential Character of Collinsville and Birds Landing

Starting at the first workshop, many residents expressed a desire to keep Collinsville, and to a lesser extent Birds Landing, as they are right now. There was less discussion of Birds Landing due to more limited attendance from residents of that portion of the study area. Discussion of residential uses and designations often became confusing due to the fact that the current General Plan and Zoning designations for the Collinsville town site are inconsistent with the land uses actually found there. Most of the resident participants who reiterated that they wanted to 'keep it the way it is' were referring to the existing land uses, but a smaller number of residents were actually referring to either the General Plan designation (Commercial Recreation in Collinsville) or the Zoning designation (Extensive Agricultural in Collinsville).

Industrial Uses

There was extensive discussion of industrial development in the Collinsville area. This was initially focused on a single proposal for industrial development on land that was formerly owned by Dow Chemical and is currently owned by the Sacramento Municipal Utility District (SMUD). As the workshops continued, representatives of the Pacific Gas and Electric Company and SMUD attended workshops, and comments in writing were submitted by landowners, which expanded the conversation to industrial uses in general and the types of industrial uses that should be permitted.

Marsh and Other Natural Resources

The condition of the Suisun marsh and other natural resource areas within the study area was discussed frequently. Many residents commented that they liked living in an area with so many natural resources and would like to see them restored and preserved, rather than developed.

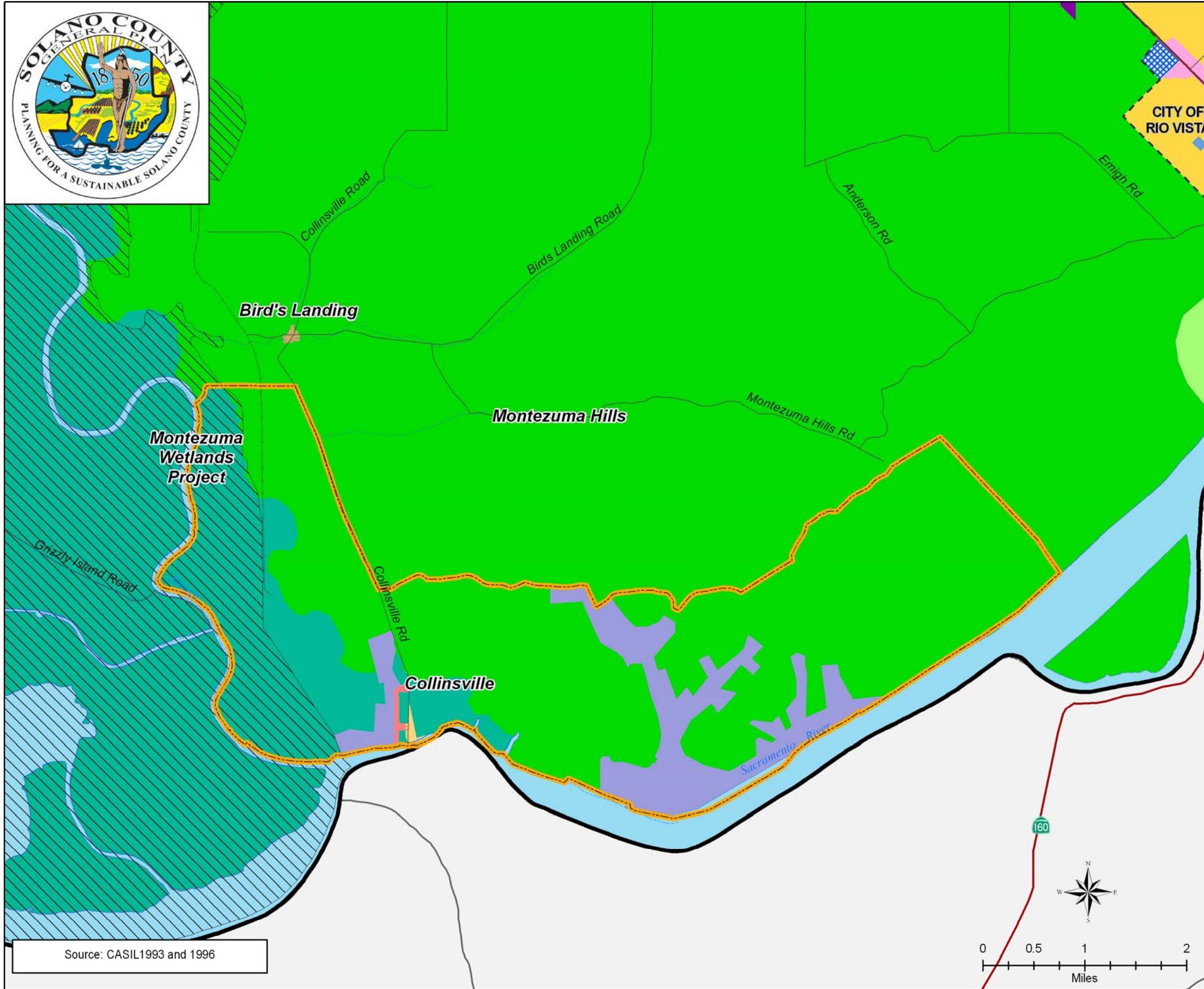
Infrastructure/Roadways

There was discussion of two infrastructure issues. The first was provision of septic for the existing homes in Collinsville. The second was traffic impacts that could result from industrial development.

Collinsville Land Use Plan

Based on the community input from the public workshops, the land use plan for Collinsville is intended to maintain the residential character of Collinsville and Birds Landing, retain the possibility for future industrial development outside of the existing community, and protect the condition of Suisun Marsh and other natural resource areas.

Extensive changes were made to the land use designations found in the 1979 *Collinsville-Montezuma Hills Area Plan and Program*; however, the focus will remain on providing land for industrial uses that rely on the Collinsville area's unique access to the Sacramento River and wind resources, with a focus on production of renewable energy. Expanded focus is given to maintaining and enhancing the current traditional communities of Collinsville and Birds Landing and ensuring that uses in other parts of the study area are compatible with those communities. The land use diagram for Collinsville is presented in Figure SS-5.



"Planning for a Sustainable Solano County"

Goal and Policies

The following goal and policies were developed based on community input and along with the land use diagram will be used to review and update the Collinsville-Montezuma Hills Area Plan.

Goal

-
- SS.G-3:** **Protect and maintain the historic communities of Birds Landing and Collinsville while continuing to provide opportunities for industrial development that are compatible with the Collinsville area.**

Policies

-
- SS.P-19: Support the continued commercial use of existing commercial parcels in Birds Landing.
- SS.P-20: Explore historic preservation for historic buildings located within the study area.
- SS.P-21: Preserve the residential character of the Collinsville town site; ensure that any future nonresidential uses are compatible with the residential character and that an adequate buffer is established between residential and nonresidential uses.
- SS.P-22: Preserve and enhance residential and commercial uses in Birds Landing.
- SS.P-23: Focus on renewable energy in the development of Water Dependent Industrial uses.
- SS.P-24: Provide adequate circulation for new industrial development in the Water Dependent Industrial land use designation, and protect circulation for adjacent, nonindustrial land uses, including agricultural and other local traffic.
- SS.P-25: Support the development of Commercial Recreation uses in designated portions of the Collinsville town site.
- SS.P-26: Maintain and support the expansion of neighborhood commercial uses appropriate for the traditional community in Birds Landing.
- SS.P-27: Protect existing historic communities from floodwaters by supporting the ongoing maintenance of levees and other flood control mechanisms.

Implementation Programs

Regulations

SS.1-7 Review and update the Collinsville-Montezuma Hills Area Plan and Program consistent with the Collinsville special study area land uses, policies and programs. The Area Plan policies and programs that apply to the secondary management area of the Suisun Marsh shall be reviewed and updated consistent with the Suisun Marsh Protection Plan.

Related Policies: SS.P-19, SS.P-20, SS.P-21, SS.P-22, SS.P-23, SS.P-24, SS.P-25, SS.P-26, SS.P-27

Agency/Department: Department of Resource Management

Funding Source: General Fund, Project Applicants

Time Frame: 2011

Funding, Physical Improvements, and Capital Projects

SS.I-8: Evaluate the circulation system within the Water Dependent Industrial area and upgrade it when necessitated by industrial development to ensure that industrial and nonindustrial uses, particularly agriculture, can coexist in the area. Future industrial development will be required to mitigate possible traffic impacts, including impacts of construction traffic. If a new industrial roadway is developed, consider an alternative to the current alignment shown in the 1979 Collinsville–Montezuma Hills Area Plan and Program, including an alternative to avoid extension of the industrial roadway through the City of Rio Vista. Protect the agricultural function of existing roadways.

Related Policy: SS.P-24

Agency/Department: Department of Resource Management

Funding Source: Development fees; General Fund

Time Frame: Ongoing

SS.I-9: Explore additional funding mechanisms for levees to protect the Collinsville town site. Protect existing, historic communities from floodwaters by supporting the ongoing maintenance of levees and other flood control mechanisms.

Related Policy: SS.P -27

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach, and Education

SS.I-10: Evaluate potentially historic buildings and develop a program to protect those that are of local, state, or national importance.

Related Policies: SS.P-23

Agency/Department: Department of Resource Management

Funding Source: Grant funds; General Fund

Time Frame: Ongoing

SS.I-11: Work with property owners to establish appropriate businesses in the Commercial Recreation area of the Collinsville town site; maintain an open dialogue with neighboring residents to ensure that the uses are sufficiently buffered from residential uses. Ensure separation between residential uses and any future commercial or marina activities to the west of Collinsville.

Related Policies: SS.P-21, SS.P-25

Agency/Department: Department of Resource Management

Funding Source: General Fund; Development fees

Time Frame: Ongoing

SS.I-12: Work with business and property owners to provide support for neighborhood-serving commercial uses in Birds Landing, including investigating the possibility of providing low-interest loans or other assistance for business upkeep and development. Maintain and support the expansion of Neighborhood Commercial uses appropriate for the traditional community in Birds Landing. Ensure that the Birds Landing Hunt Club can continue in its present use.

Related Policies: SS.P-22, SS.P-26

Agency/Department: Department of Resource Management

Funding Source: General Fund

Land Use Chapter

Time Frame: Ongoing

SS.I-13: Continue to promote the development of renewable energy production in the Collinsville area. Renewable energy should be considered in the development of the Water Dependent Industrial area. Maintain an agricultural or marsh buffer between homes in Collinsville and any future industrial uses to mitigate visual impacts, glare, noise, and particulates.

Related Policy: SS.P-23

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

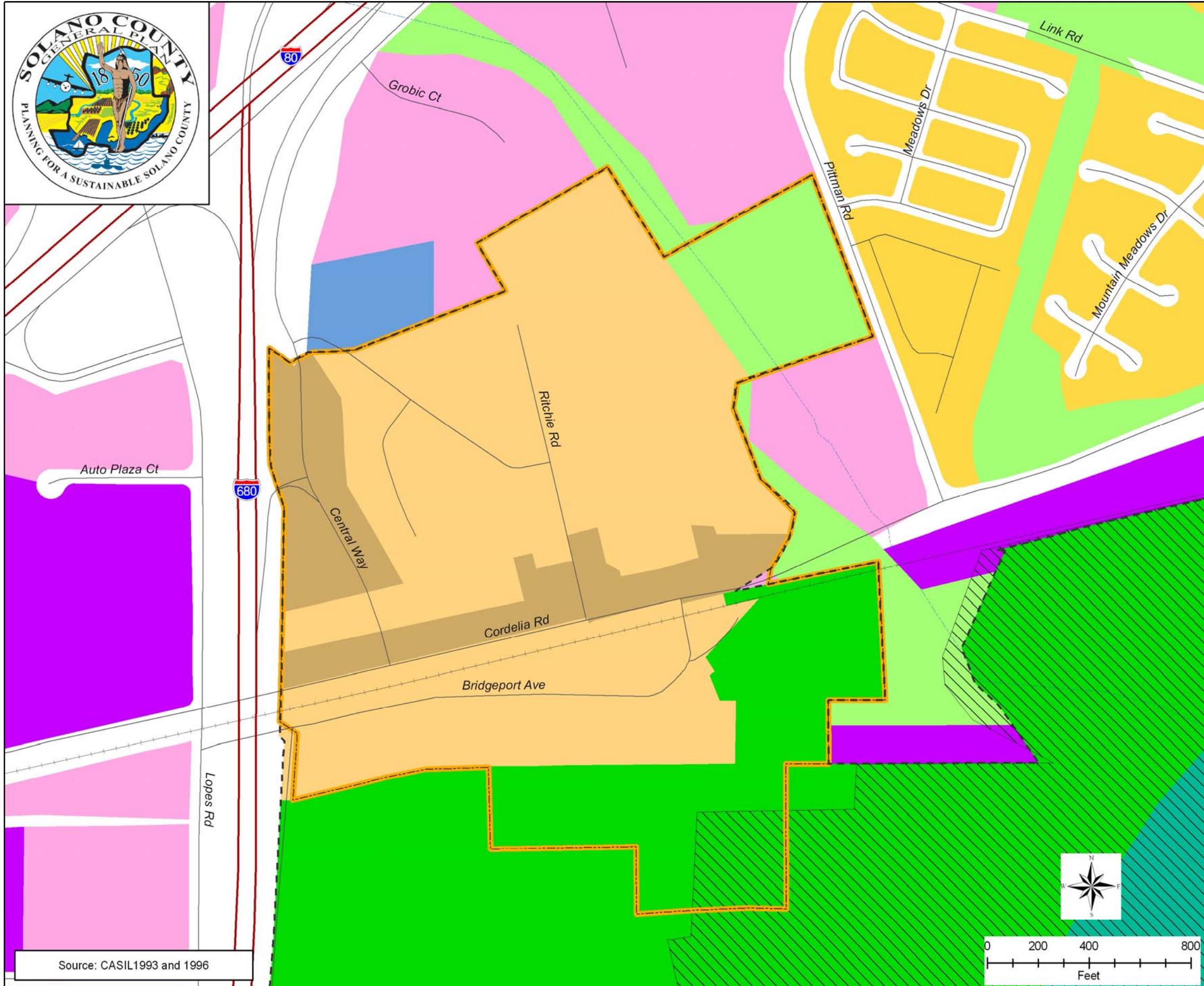
Old Town Cordelia

Old Town Cordelia is located in central Solano County in an unincorporated area of the County, located just outside of the Fairfield city limits (Figure SS-6). Cordelia is and has historically been located at the crossroads of several important transportation routes. It is located near the head of Cordelia Slough (also known as Green Valley Creek), a navigable waterway that leads to Suisun Bay; on the main line of the Union Pacific Railroad (formerly the Southern Pacific Railroad); and next to the junction of three highways—Interstate 80 (I-80) running east-west, Interstate 680 (I-680) running north-south, and SR 12.



Cordelia Slough runs through Old Town Cordelia

Old Town Cordelia is situated between the wetlands of the Suisun Marsh and the agricultural lands of the Green Valley. The town is clearly defined at its western boundary by I-680, which also serves as a visual and physical barrier for the community. Cordelia is surrounded by the city of Fairfield on its northern, western, and eastern boundaries, and Suisun Marsh lies just south of the community. The California Department of Transportation conducted an inventory and evaluation of Old Town Cordelia in 1988 and determined that the historic district met the criteria to be listed in the National Register of Historic Places. Thirty-three structures—24 single-family residences, three farmsteads, and six commercial or civic structures—from the period of 1870–1934 were identified as contributing to the district's historic significance.



Solano County General Plan
Figure SS-6
Old Town Cordelia SSA
Land Use Diagram

Legend

Cordelia SSA

General Plan Land Use Designations

Natural Resource Designations

Park and Recreation

Marsh

Agricultural Designations

Agriculture

Public Designations

Public/Quasi-Public

Residential Designations

Traditional Community - Residential

Traditional Community - Mixed Use

Urban Residential

Commercial Designations

Urban Commercial

Industrial Designations

Urban Industrial

Overlays

Resource Conservation Overlay

Basemap Layers

Roadways

Railroads

Streams and Creeks

Major Water Features

Municipal Service Areas

Community Involvement Process

Three community meetings were held in Cordelia in summer 2007. Based on the input received at these three meetings, goals, policies, and a recommended land use diagram were established for Cordelia. The recommended land use diagram was further refined by the Planning Commission and Board of Supervisors. The goal and policies are described below, and the land uses are shown in Figure SS-6. During the course of the three community workshops for Old Town Cordelia the following were recurring themes.

Traffic

There was general consensus in the community that more action needed to be taken to address large volumes of cut-through traffic and speeding that is occurring, especially on Cordelia Road and Bridgeport Avenue. The community expressed concerns about safety and the desire to maintain the community's small town, rural-residential character and quality of life. The community also expressed interest in having traffic undulations or other traffic calming designs installed in the neighborhood that would cut down traffic speeds and the amount of cut-through traffic within the community.

Flooding

Concerns regarding flooding and how to prevent future flooding occurrences were expressed. Residents attributed the frequency of flooding to the new developments that have been taking place in Fairfield and to urban runoff originating from the I-680 freeway. Sources of local flooding were thought to be from the Jameson Canyon Creek, the Green Valley Creek, and Dan Wilson Creek. Residents emphasized the necessity for all new future development to manage its own water flows to pre-existing condition levels. There was also concern regarding the decreased depth of the Green Valley Creek channel over time and its future carrying capacity. Residents also asked the County to modernize and improve the existing drainage infrastructure systems.

Historic Preservation/Loss of Significant Historic Structures

The historic identity of Old Town Cordelia was a quality of the community that most residents valued and wanted to preserve and enhance. Disappointment was expressed regarding the loss of the old elementary school, which many residents attended, and the lack of action on the part of the County to preserve the old school site. The community was also interested in finding out what resources could be made available to assist owners with the maintenance and upkeep of their historic homes and wanted to learn more about the pros and cons of establishing Old Town Cordelia as a historic district and the other historic preservation options that may be considered. Suggestions included having more community events to celebrate the history of the community and the idea of a historic walking path with interpretative signs and plaques to educate and share that history with the community. The abandoned middle school site in the north-west quadrant of the community was also suggested as a potential historic site. Former students of the school indicated that the gymnasium building was built by the hands of the students themselves.

Streetscape and Bike Trail Improvements

Questions arose regarding a proposed bike trail improvement project on Cordelia Road that the County had won a planning grant from the Metropolitan Transportation Commission to study. The community had mixed reactions regarding the potential benefits of the bike trail. Residents liked the idea of the streetscape improvements that would result from the trail improvements at Cordelia Road, but also expressed an interest in seeing similar streetscape improvements on Bridgeport Avenue and other streets in the community.

Potential Future Uses, Growth and Development

When asked about future land uses, the community favored maintaining the current rural residential character but had mixed opinions about the amount and nature of future commercial development they thought would be appropriate and viable for Old Town Cordelia.



Goals and Policies

The following goal and policies were developed based on community input. These policies and programs, in combination with the land use diagram will be used to evaluate and direct the County's planning and capital improvements within Old Town Cordelia.

Goal

-
- SS.G-4: Protect and maintain the historic community of Cordelia while providing opportunities for appropriate future development.**

Policies

-
- SS.P-28: Prevent the loss of significant historic buildings and structures and support incentives that encourage individual property owners to preserve the historic character of Old Town Cordelia properties and to learn about the history of the town.
- SS.P-29: Ensure that any future development is appropriately designed and scaled to fit in with the community's historic context.

- SS.P-30: Support plans and policies that reduce the traffic impacts on Old Town Cordelia.
- SS.P-31: Work with local residents, the City of Fairfield, water agencies, and the Fairfield Unified School District to complete improvements to infrastructure, recreational facilities, and other public facilities in Old Town Cordelia, including flood prevention infrastructure, a neighborhood park, and streetscape improvements and street furniture.
- SS.P-32: Work with the City of Fairfield and other water and resource agencies to monitor recurring flooding in Old Town Cordelia and the performance of Cordelia Slough to determine whether it is functioning and will continue to function at a safe carrying capacity.

Implementation Programs

Funding, Physical Improvements, and Capital Projects

- SS.I-14: Support plans and policies that reduce the traffic impacts on Old Town Cordelia. Ensure that future improvements to regional roadways avoid additional traffic impacts on Old Town Cordelia by diverting traffic to alternate routes. Encourage the use of traffic calming features on Cordelia Road and Bridgeport Avenue that slow or divert pass-through traffic, but do not compromise public safety or emergency access. Provide for convenient and appropriately scaled local neighborhood services and family-oriented commercial uses without creating additional traffic or parking needs.

Related Policy: SS.P-30

Agency/Department: Department of Resource Management

Funding Source: General Fund; Grant funds

Time Frame: Ongoing

-
- SS.I-15: Work with local residents, the City of Fairfield, water agencies, resource agencies, and the Fairfield Unified School District to complete improvements to infrastructure and public facilities in Old Town Cordelia, including flood prevention infrastructure, a neighborhood park (possibly on the site of the former Green Valley Middle School), and streetscape improvements and street furniture, and to enhance the community's recreational resources. Work with the water agencies to monitor recurring flooding in Old Town Cordelia and the

performance of Cordelia Slough to determine whether it is functioning and will continue to function at a safe carrying capacity. Work with resource agencies to resolve current and future sediment loads, downstream flooding issues, and silt deposits on properties and in sloughs downstream to protect fish and wildlife resources, downstream habitat, and property. Work with the school district to determine desirable future uses for the vacant former Green Valley Middle School site.

Related Policies: SS.P-31, SS.P-32

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

SS.I-16: Design a uniform system of signage and street furniture emphasizing a historic theme and/or using traditional materials and forms from Old Town Cordelia. In coordination with streetscape improvements, signs and street furniture should be compatible with their surroundings and opportunities for outdoor dining should be encouraged.

Related Policies: SS.P-29, SS.P-31

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach, and Education

SS.I-17: Work with the community to study the potential for new infill standards, design guidelines, and/or economic incentives to ensure that any future development is appropriately designed and scaled to fit in with the community's historic context.

Related Policy: SS.P-29

Agency/Department: Department of Resource Management

Funding Source: General Fund; Grant funds

Time Frame: Ongoing

SS.I-18: Prevent the loss of significant historic buildings and structures and study incentives that encourage individual property owners to preserve the historic character of Old Town Cordelia.

Related Policy: SS.P-28

Agency/Department: Department of Resource Management

Funding Source: General Fund; Grant funds

Time Frame: Ongoing

"Planning for a Sustainable Solano County"

Land Use Chapter

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"Planning for a Sustainable Solano County"

3

AGRICULTURE

INTRODUCTION

Agriculture has historically been both an important industry in Solano County and a central part of the county's identity. Agricultural lands account for more land than any other land use. Agriculture contributes to regional economic health and prosperity, defines much of the County's visual character, supports wildlife habitats and migration corridors, provides open space and recreational amenities for residents and visitors, and acts as community separators defining the county's cities. The combined benefits of agriculture help make Solano County a great place to live, work, and visit.

This chapter provides a single location for the County's agricultural goals and policies, which are closely related to goals and policies in the Land Use, Conservation, and other chapters of the General Plan.

The General Plan vision statement expresses a desire to ensure the long-term protection of agricultural opportunities in the county through recognition of these economic, environmental, and social equity benefits. It states:

We will use our natural and agricultural resources as economic opportunities while also recognizing their environmental value. We will strive to enhance the quality of our natural and agricultural resources as visitor attractions and contributors to our economy while giving equal weight to their environmental value. We will support small family farms and large agricultural businesses alike in a committed effort to enhance the viability of agriculture for future generations in this county. We will encourage Solano County residents to visit and learn about our local farms and encourage them to buy from local farmers. By doing so, we may also encourage farmers to provide sustainable goods and services for our community.

...We can sustain the unique character and identity of our communities while simultaneously valuing our agricultural identity in rural areas. We will use our natural habitat, farmlands, and water resources to maintain separation among our cities and unincorporated communities.

Agriculture Chapter

Because we value the quality of our air, soil, water, and other finite natural resources, we will continue to enhance agricultural business and preserve agricultural lands and resources...

In addition to the general vision statement, the Citizens' Advisory Committee (CAC) Agricultural Subcommittee conducted numerous workshops within the farming community and drafted a vision statement to specifically address the agricultural industry's importance to the county and to pledge support for its protection and preservation. This vision states:

Agriculturists (Farmers & Ranchers) in Solano County are wise stewards of our natural resources. They support the concept that the land on which they produce food and fiber is valuable and worth economic preservation for the future. Solano County residents support the concept of enhancing the rural environment while assisting the urban environment with their internal development. The rural identity and unique character of agricultural areas is valued by the County.

Because the agricultural industry is a major contributor to the overall economic health of Solano County, it is our desire to contribute to its prosperity. The agricultural economy is diverse and the support of individual business rights is recognized. The County will support farm operations both large and small and support the development of agricultural related industries that will make the economy stronger.

The greatest assets to the industry are the individuals who toil in the fields to achieve their individual goals. The County will support farmers in their efforts and will strive to support programs and activities that will enhance their efforts.

The major strategies in this chapter as well as the goals and policies derive from these elements of the vision statement:

- ensuring that agriculture endures as an essential part of Solano County's identity and lifestyle;
- maintaining and promoting agriculture as an important business and major contributor to Solano County's economy;
- preserving additional values of agricultural land, including important scenic value within the rural environment, providing habitat, providing options for recreation, and serving as a community separator defining the county's distinct cities; and
- providing opportunities for agriculture to serve as an educational tool and tourist draw.

This chapter identifies goals, policies, and implementing programs that serve as an outline to guide the County toward fulfilling this vision.

Scope and Content

This chapter is organized into the following sections. The first section provides introductory information and regulatory context. Next, current (2007) agricultural conditions are briefly described. These conditions provide context for a plan narrative, followed by the County's goals, policies, and implementation programs.

Purpose and Relationship to Other General Plan Chapters

The purpose of this chapter is to recognize the value of agriculture and present goals, policies, and programs that support the growth and health of agriculture in Solano County.

State general plan guidelines do not require an agriculture element as part of a general plan. However, the agricultural community, the public and the CAC all supported grouping agriculture goals, policies, and programs as an optional element or subject category, rather than addressing agriculture issues as part of one or more mandated elements.

Section 55303 of the California Government Code allows counties and cities to adopt "any other elements or address any other subjects, which, in the judgment of the legislative body, relate to the physical development of the county or city." This provision is made so that counties and cities can address important issues of local concern. Once adopted, optional general plan elements are legally equivalent to, and must be internally consistent with, the seven mandatory subject categories.

This chapter addresses several issues that are required parts of mandatory general plan elements. For example, a land use element must include the distribution of agricultural land and the locations of lands subject to Williamson Act contracts or in other land conservation programs. The conservation element must address the conservation of agricultural soils as a resource. Open space elements must address issues related to open space for the managed production of resources, including agricultural lands.

In addition to addressing topics that are included in state general plan guidelines for mandatory elements of the general plan, this chapter covers issues related to Solano County's agricultural economy, which are closely related to those described in the Economic Development chapter.

Related Plans, Programs, and Agencies

Support for agricultural production and preservation can be found in numerous plans and programs established by multiple agencies and organizations. Those that most affect Solano County agriculture are described below.

Farmland Mapping and Monitoring Program

The California Department of Conservation, Division of Land Resource Protection, administers the Farmland Mapping and Monitoring Program (FMMP) to analyze impacts on the state's agricultural resources. Land is rated based on its soil characteristics and irrigation status. These ratings are then used to help prioritize conservation efforts. The FMMP uses the term **Important Farmland** to describe parcels that meet certain criteria.

In Solano County, three Important Farmland types have been identified: Prime Farmland, Farmland of Statewide Importance, and Unique Farmland. According to the FMMP:

Prime Farmland is "farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date."

Farmland of Statewide Importance is "farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date."

Unique Farmland is "farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include nonirrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date."

Based on 2006 mapping data, approximately 139,459 acres in Solano County are identified by the FMMP as Important Farmland (Figure AG-1). These lands are concentrated in the northeastern portion of the county because of the prevalence of grazing activity in southern areas.

Williamson Act

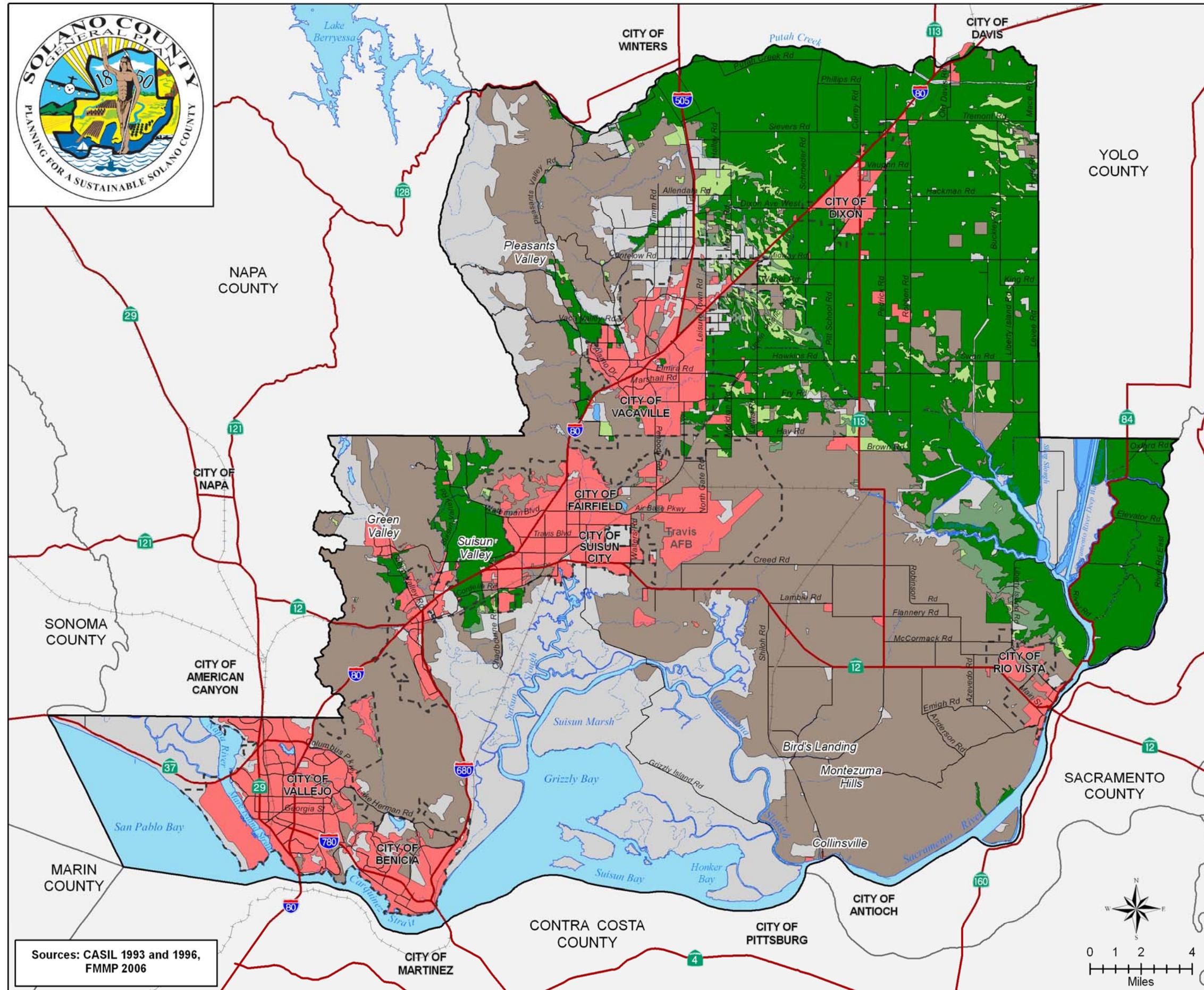
The California Land Conservation Act of 1965 (referred to as the Williamson Act) is the most effective agricultural conservation tool currently available. Under the Williamson Act, local governments can enter contracts with private property owners to protect land for agricultural and open space purposes. This voluntary program offers tax breaks by assessing lands based on actual use (agricultural or open space) as opposed to their potential full market value, creating a financial incentive to maintain farmland and open space, as opposed to allowing conversion to other uses.

The Williamson Act program uses rolling 10-year contracts that renew annually until either party files a "notice of non-renewal." If an owner decides to opt out, the land is still protected for 10 years while the tax liability increases in annual increments up to its full market value.

Solano County General Plan

Figure AG-1

Important Farmland



Legend

- Prime Farmland
 - Farmland of Statewide Importance
 - Unique Farmland
 - Grazing Land
 - Urban and Built-Up Land
 - Other Land
 - Water
- Basemap Layers**
- Roadways
 - Highways
 - Railroads
 - Streams and Creeks
 - Major Water Features
 - Municipal Service Areas
 - Adjacent Counties

"Planning for a Sustainable Solano County"

Agriculture Chapter

Additionally, existing Williamson Act contracts on lands classified by the California Department of Conservation as Important Farmland can be extended to 20-year Farmland Security Zone contracts (called super Williamson Act contracts), which offer landowners greater property tax savings.

Statewide, more than 16.5 million acres have been protected under Williamson Act contracts, representing more than half of the State's agricultural and open space lands. In Solano County, roughly 215,000 acres are held in Williamson Act contracts, representing 62 percent of the county's agricultural lands (Figure AG-2).

Right-to-Farm Ordinance

Chapter 2.2 of the Solano County Code protects farm operations from nuisance complaints associated with residential uses located next to active agricultural operations. These complaints often cause farm operators to cease or curtail operations. They may also deter others from investing in farm-related improvements that would support the county's agriculture economy. This "right-to-farm ordinance", as it is commonly known, guarantees the right to continue agricultural operations, including, but not limited to, cultivating and tilling the soil, burning agricultural byproducts, irrigating, raising crops and/or livestock, and applying approved chemicals in a proper manner to fields and farmland. This ordinance limits the circumstances under which agriculture may be considered a nuisance. To prevent future conflicts, notice of this ordinance will be given to purchasers of real property in the county.

Solano Land Trust

The Solano Land Trust is a nonprofit organization whose goal is to permanently protect and preserve farmland, ranch land, and open space in the county. As of 2007, the Solano Land Trust has permanently protected 19,403 acres through acquisition, conservation easements, education, and land management.

CURRENT SOLANO COUNTY AGRICULTURE

Grapes ripening on the vine in Suisun Valley



according to commodities grown, soil conditions, cultivation practices

Several agricultural studies and reports have been prepared to determine the current (2006) condition of agriculture. Among these studies was the Solano Agricultural Futures Project, prepared by the University of California Agricultural Issues Center. This project identified nine distinct agricultural regions, each characterized as a separate farming system

and water conditions. These regions were Winters; Dixon Ridge; Elmira and Maine Prairie; Montezuma Hills; Ryer Island; Suisun and Green Valleys; Pleasants, Vaca, and Lagoon Valleys; Jepson Prairie; and Western Hills.

In addition to these nine regions, the County has identified Green Valley as a separate region because of the agricultural characteristics of the Valley and General Plan policies recommending a specific plan for Middle Green Valley. Figure AG-4 shows the location of these 10 regions. The details of these regions follow under the "Agricultural Regions" section.

Agricultural Economy

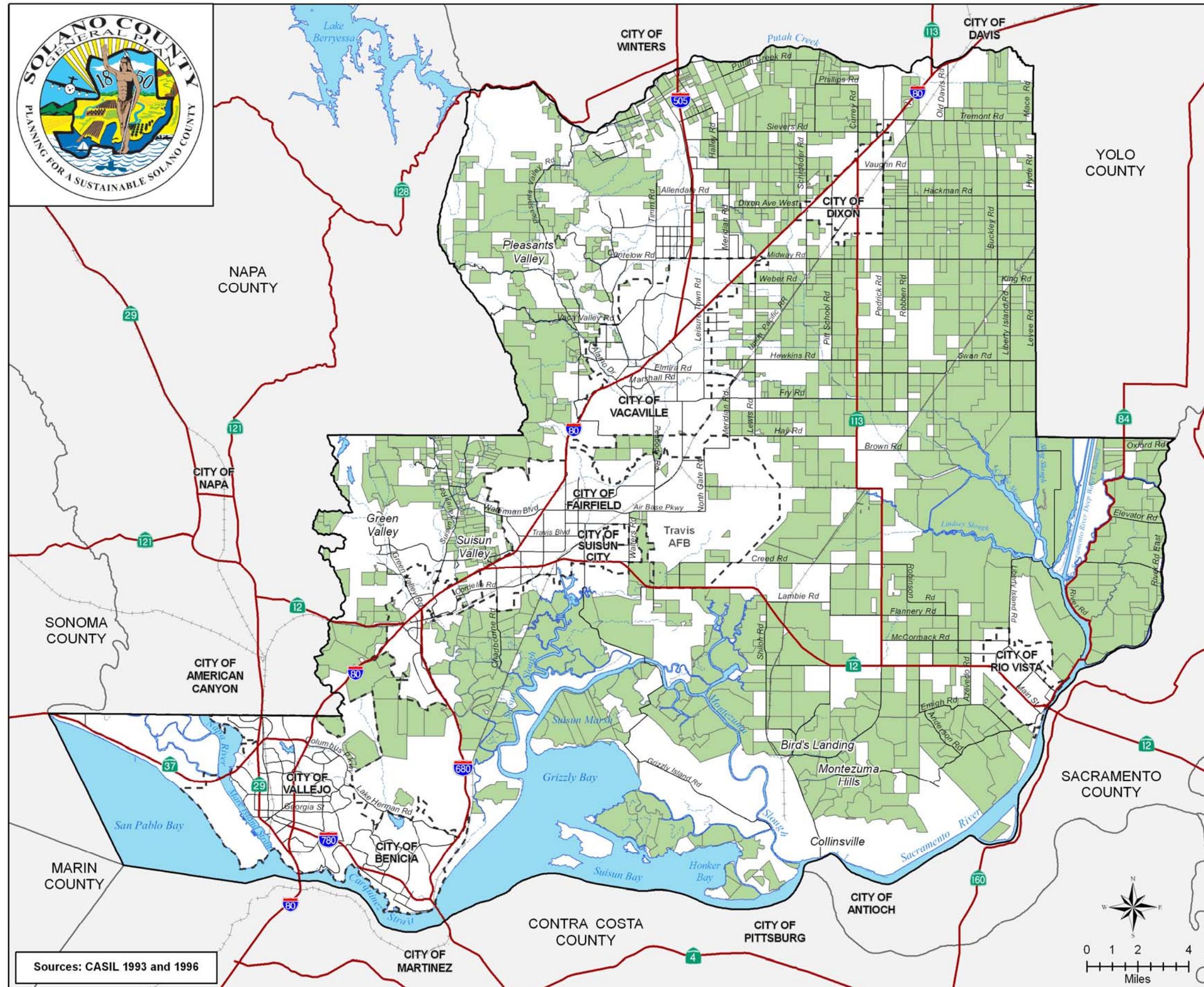
As an industry, agriculture generated approximately \$233 million in commodity sales in 2006. Further, every dollar generated by agriculture sales is estimated to generate \$0.58 elsewhere in Solano County's economy, bringing agriculture's total economic contribution to an estimated \$360 million. For every job created in agriculture, 0.7 job is created in supporting and related industries, further increasing the overall benefit that the industry provides to the county.

Cropping patterns have been evolving in Solano County over the past 25 years. Since 1981, only four commodities have remained in the top 10 of gross market sales: nursery products, cattle, hay, and tomato processing. Commodities new to the top 10 list in 2006 were bell peppers, walnuts, milk, wine grapes, dried plums, and almonds. Nursery products are an important commodity in the county and have been number one in terms of gross sales since 2000. Commodities that have fallen out of the top 10 since 1981 include sugar beets (attributable to processing plant closure), wheat, corn, beans, sheep, and pears.

As agricultural markets shift, increasing the value added to agricultural produce locally can help Solano County's farmers maintain viable businesses. Local processing and sales operations for the county's farm produce can keep more money from the distribution of agricultural products in the county.

Agricultural Land Use

In 2006, Solano County had 373,500 acres of land in agriculture. Of these acres, 360,562 were under agricultural production, according to the Solano County Agricultural Commissioner's annual report. The acreage dedicated to the various crops and other agricultural activities is shown in Table AG-1.



Solano County General Plan

Figure AG-2

Williamson Act Contracts (2006)

Legend

- Williamson Act Contracts
- Basemap Layers
- Roadways
- Highways
- Railroads
- Streams and Creeks
- Major Water Features
- Municipal Service Areas
- Adjacent Counties

"Planning for a Sustainable Solano County"

Table AG-1
Areas in Agricultural Production (2006)

Use Classification	Acres (2006)	Percent of Total
Field Crops	92,155	26%
Fruit and Nut Crops	19,072	5%
Pasture and Rangeland	202,826	56%
Seed Crops	13,283	4%
Vegetable Crops	12,236	3%
Nursery Stock	1,827	0.5%
Other	19,163	5.5%
TOTAL	360,562	100%

Grazing land is the largest single use of farmland in the County.



According to the 2002 U.S. Department of Agriculture Census of Agriculture, there has been a trend involving an increase in farm size and a decrease in the number of farms in the county. The average farm size was 384 acres, up from 378 acres in 1997. This pattern mirrors the national trend as smaller farms are combined into larger assemblages that can support industrial farming operations.

Of the county's 915 farms in 2002, more than 60 percent were small farms ranging from 1 to 49 acres. Those ranging from 50 to 500 acres accounted for another 27 percent. The remaining 12 percent was composed of farms of more than 500 acres. The high number of small farms is due in part to the large number of rural homesites within the County and in part to the census definition of "farm," which includes a property that produces only \$1,000 in gross revenue.

Despite their increase in total numbers, the small farms represent less than 2.5 percent of the county's farmland, compared to 91 percent for the large farms. Because an overwhelming majority of farmland is held by large farm operations, the General Plan seeks to protect the viability of these operations from parcelization and encroaching land use changes.

Water availability is extremely important to agriculture. For example, the presence of irrigation is required for land to be classified by the FMMP as Prime agricultural land. In Solano County, water for irrigation is provided by three sources: irrigation districts (Solano Irrigation District, Maine Prairie and Reclamation District No. 2068); sloughs from the Sacramento River and Putah Creek; and groundwater wells. The Solano Irrigation District, located in the Dixon Ridge region, Pleasants/Vaca/Lagoon Valleys, Suisun Valley, and Green Valley regions provide water to approximately 57,550 acres of agricultural-zoned land. As the county and its neighbors continue to urbanize, competition for water resources will continue to increase. The General Plan supports agricultural activities that reduce the industry's

Agriculture Chapter

dependence on water, promotes farming practices that maximize use of this valuable resource.

Conservation and Farmland Conversion

The county's location between two growing metropolitan regions has resulted in rapid increases in land value. Between 2001 and 2006, prices nearly doubled, resulting in larger tax bills for everyone, including agricultural land owners. Low interest rates and low land values (compared to the Bay Area) fueled land speculation and rural homesite purchases. The county's natural beauty and access to Interstate 80 (I-80) prompted investors to purchase land in the Dixon Ridge and Suisun Valley areas, providing access to employment opportunities in the San Francisco and Sacramento areas.



Solano Land Trust ©

The County can work with groups like the Solano Land Trust to protect farmland permanently.

Changes in Solano County land use from 1984 through 2006, calculated using the 2006 FMMP data, are presented in Table AG-2. Negative change indicates loss of area, and positive change indicates gain in area. Although some of the changes in mapped land uses are artifacts reflecting changes in survey methodology over this 22-year period, a large part of the reported loss of Important Farmlands (classifications of Prime, Statewide Importance, and Unique) is attributable to their conversion to urban land or low-density development included in the category of other land. Area mapped as Important Farmland in 1984 that had become urban and built-up land or other land in the 2006 FMMP survey amounted to 18,672 acres.

Table AG-2
Farmland Conversion (1984–2006)

FMMP Land Use	Acres		Change 1984-2006	
	1984	2006	Acres	Percent
Prime Farmland	152,140	139,459	-12,681	-8.3%
Statewide Importance	12,613	7,159	-5,454	-43.2%
Unique Farmland	16,102	11,031	-5,072	-31.5%
Grazing Land	220,008	202,702	-17,306	-7.9%
Urban and Built-up Land	40,145	58,590	+18,445	+45.9%
Water (over 40 acres)	50,579	49,717	-863	-1.7%
Other land	90,430	113,360	+22,930	+25.4%

Agricultural Identity and Tourism

Agricultural tourism centers like Mankas Corner can contribute to the continuing viability of agriculture.



During the preparation of the General Plan, the community overwhelmingly identified the importance of agriculture and farming to Solano County's identity and culture. This importance is reflected in the vision statement. This chapter of the General Plan outlines several objectives related to economic development and increasing tourism, especially agri-tourism, to Solano County. Policies permitting increased agricultural service and local sales uses, as well as programs to encourage increased agri-tourism and branding of local Solano County produce, are expected to help maintain the locally prominent position of agriculture.

AGRICULTURAL CONSERVATION TOOLS

This chapter provides a basis for the future agriculture policy direction in Solano County by describing strategies and implementation tools for protecting the viability of agriculture in the county. Potential strategies are explained as they relate to the 10 agricultural regions. The section concludes with a brief introduction to the activities that the County may engage in to aid in the economic development of agricultural uses, many with a region-specific focus.

Conservation Techniques

In addition to tools administered by other agencies, as described in the "Related Plans, Programs, and Agencies" section, the County could independently use a number of incentives and other tools. These planning tools protect and maintain agricultural lands, promote investment in agriculture-related improvements, and increase the marketability of Solano County-grown products.

Transfer of Development Rights

In response to strong development pressures, the County intends to establish a **Transfer of Development Rights** (TDR) program to protect agricultural lands. This tool can be used in areas where agricultural lands are threatened by development pressure. TDR programs enable property owners to protect a resource, such as agricultural land, while still benefiting financially from the land's development potential. Property owners of land with resources targeted for conservation are allowed to sell their development rights in exchange for permanent resource protection. The purchased development rights can be used in areas that have been identified as appropriate for future growth. To define areas targeted for conservation and development, TDR programs require the

creation of sending and receiving zones. Figure AG-3 below shows a hypothetical transaction under a TDR program.

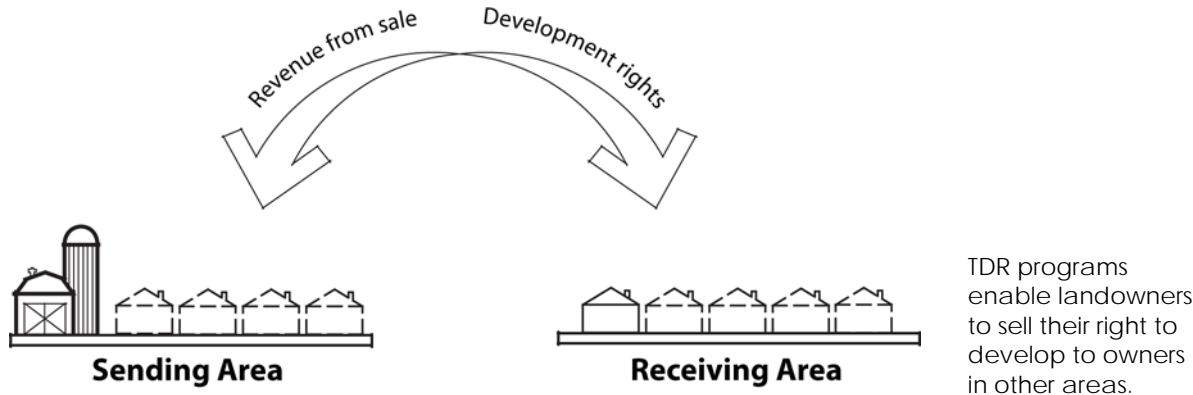


Figure AG-3
Transfer of Development Rights

In Solano County, prime agricultural lands, habitat areas, and the sensitive delta area could be protected by diverting development toward appropriate municipal areas. The use of TDRs is especially relevant in the Green Valley region as it is included within the Middle Green Valley special study area policies, found in the Land Use chapter.

Urban-Agricultural Buffers

This chapter also includes policies to reduce conflicts between residential and agricultural uses. Urban-agricultural buffers are strips of vegetated land (typically ranging from 300 to 500 feet) located within city municipal service areas that are used to help reduce complaints due to normal agricultural operations near residential areas. With appropriate vegetation management, the buffer can also prevent pesticide drift resulting from agricultural spraying. The cost to maintain these buffers is typically born by the proposed development project rather than the agricultural landowner/farmer, and managed or maintained by the adjacent city, a homeowners association, or special district. The cost to create and maintain these buffers would be paid by the new development through development impact fees or ongoing maintenance fees.



Buffers between residential and agricultural areas may reduce potential conflicts between residents and farmers.

Farmland Mitigation

Conversion of agricultural land to other uses removes that land from agricultural production and may place increased pressure on adjacent land to also convert. This chapter includes policies that establish a

farmland mitigation program for agricultural land converted as a result of nonagricultural development. Mitigation may be in the form of conservation easements, outright purchase of other agricultural properties for protection, or in-lieu fees paid to the County. A County ordinance is required for this program. The ordinance will determine the extent of mitigation necessary, although many jurisdictions use a ratio of 1:1. Farmland that is used to support agri-tourism and agricultural processing would be exempted from this ordinance because the intent is to prevent agricultural land conversion, not to present barriers to development of agriculture-supporting industries. Agricultural landowners may choose to participate in the mitigation program but are not required to make their land available for mitigation. The County will make a special effort to encourage landowners within the Agricultural Reserve Overlay to voluntarily participate.

Right to Farm Ordinance

The County's right-to-farm ordinance, described in more detail on page AG-7, reduces further loss of agricultural land to encroaching nonagricultural uses by limiting the circumstances under which agricultural activities may be considered a nuisance. This tool is directed at the conflicts that arise when residential uses locate next to active agricultural areas. Types of activities protected under this ordinance include, but are not limited to, tilling soil, spraying approved pesticides, burning agricultural byproducts, cultivating crops, and grazing livestock. Notice of this ordinance would be given to purchasers of property in the county.

Agricultural Reserve Overlay

Agricultural land between the cities of Vacaville and Dixon and Dixon and Davis experiences high development pressure. In order to maintain the physical separation between these cities, to acknowledge the development pressure in this area, and to promote the viability of agricultural operations, the County has proposed an Agricultural Reserve Overlay as part of the Land Use Diagram, as described within the Land Use chapter. The Agricultural Reserve Overlay indicates that area in which the County will encourage private landowners to voluntarily participate in agricultural conservation easements. This overlay will incorporate existing agricultural conservation easements and establish new land easement acquisition methods (such as TDRs) that encourage landowner cooperation.

The overlay district will be established as an agricultural mitigation bank for development projects subject to County and city agricultural mitigation programs. Projects having a significant impact on valued agricultural resources in other areas of the county or participating cities would be able to mitigate this impact by paying in-lieu fees used to purchase agricultural easements from landowners in the overlay area. Easements would be held by the County or relevant land trusts, and the landowner would maintain ownership and management control.

Community Separators

The Agricultural Reserve Overlay and other agricultural land conservation practices support the establishment and maintenance of community separators. These areas between the cities are meant to help each city maintain its distinct identity and to remain physically separated from other cities. This is described in further detail in Chapter 4.

It is the desire of the County that these areas remain in agricultural use. For this reason, the County's policy is to support cities in their efforts to preserve and maintain land within agreed-upon separator areas and to continue to maintain the agricultural designation on the large contiguous areas within the Agricultural Reserve Overlay.

Agricultural Planner and Ombudsman

The creation of agricultural planner and agricultural ombudsman positions in the county can address some of the issues facing agriculture. The planner would possess knowledge of the special needs of agriculture in the county and experience navigating the planning, conservation and development processes. The ombudsman would create strategic marketing plans and serve as an intermediary between county officials and local agricultural businesses. Marketing efforts could include plans to promote agri-tourism in Solano County and to remove barriers to its success. Agri-tourism capitalizes on the unique experiences associated with agriculture by allowing visitors to interact with the production process and surrounding rural environment. Examples include bed-and-breakfast opportunities at local vineyards, organic farm tours, and ranching home stays.

Agricultural Economic Incentives and Development

The importance of agriculture as a business and contributor to Solano County's economy is an important theme of this chapter. To maintain a healthy agricultural economy in the county, the General Plan outlines a number of programs.

Increasing the value-added component to Solano's agricultural produce is the goal of the agricultural economic development program. An increase in the value-added component might be derived from an increase of on-site or local processing, allowing a finished product (rather than raw produce) to be sold either locally or to a distributor.

Marketing or branding of Solano County's produce and producing regions is another way to add value to agricultural products. As the market for local produce grows, Solano County is in a position to provide locally grown produce to nearby markets in the Bay Area and Sacramento.

The County will also support the development of limited agricultural service uses in rural areas. These agricultural services will be located in Limited Industrial- and Agriculture-designated areas and will be targeted

to serve local farmers. In addition to agricultural service uses, the General Plan provides a framework for developing services that support agri-tourism, including restaurants, bed-and-breakfasts, and similar tourist-oriented services.

To progress toward these broad agricultural economic development objectives, General Plan implementation programs lay out an agricultural economic development strategy. Agricultural economic development activities will be guided by producers and landowners in the individual agricultural regions. Each of the regions has unique economic conditions and goals, and economic development activities will be tailored to the different regions.

Agricultural Regions

The Land Use chapter of the General Plan includes description of the General Plan land use designation for agriculture. This designation is intended to support agricultural use, with minimum lot sizes defined for individual agricultural regions of the county.

Sheep grazing in the Montezuma Hills.



Several agricultural studies have identified broad geographic areas in the county that have similar agricultural characteristics. The University of California Agricultural Issues Center study identified nine regions. The county has identified a tenth region not identified separately in the Agricultural Issues Center study. The regions are:

- Dixon Ridge;
- Elmira and Maine Prairie;
- Montezuma Hills;
- Ryer Island;
- Suisun Valley;
- Winters;
- Jepson Prairie;
- Western Hills;
- Pleasants, Vaca, and Lagoon Valleys; and
- Green Valley (the tenth region not identified separately in the study).

Researchers involved in the Agricultural Issues Center study defined each agricultural region by combining satellite images, soil survey information,

county infrastructure, topography, and producer interview information. Studies have identified unique characteristics in the agricultural practices and marketing needs for each region. These characteristics make the regions valuable planning units for creating targeted agricultural policies, programs, and requirements and are recommended as the basis for region-based agricultural policies.

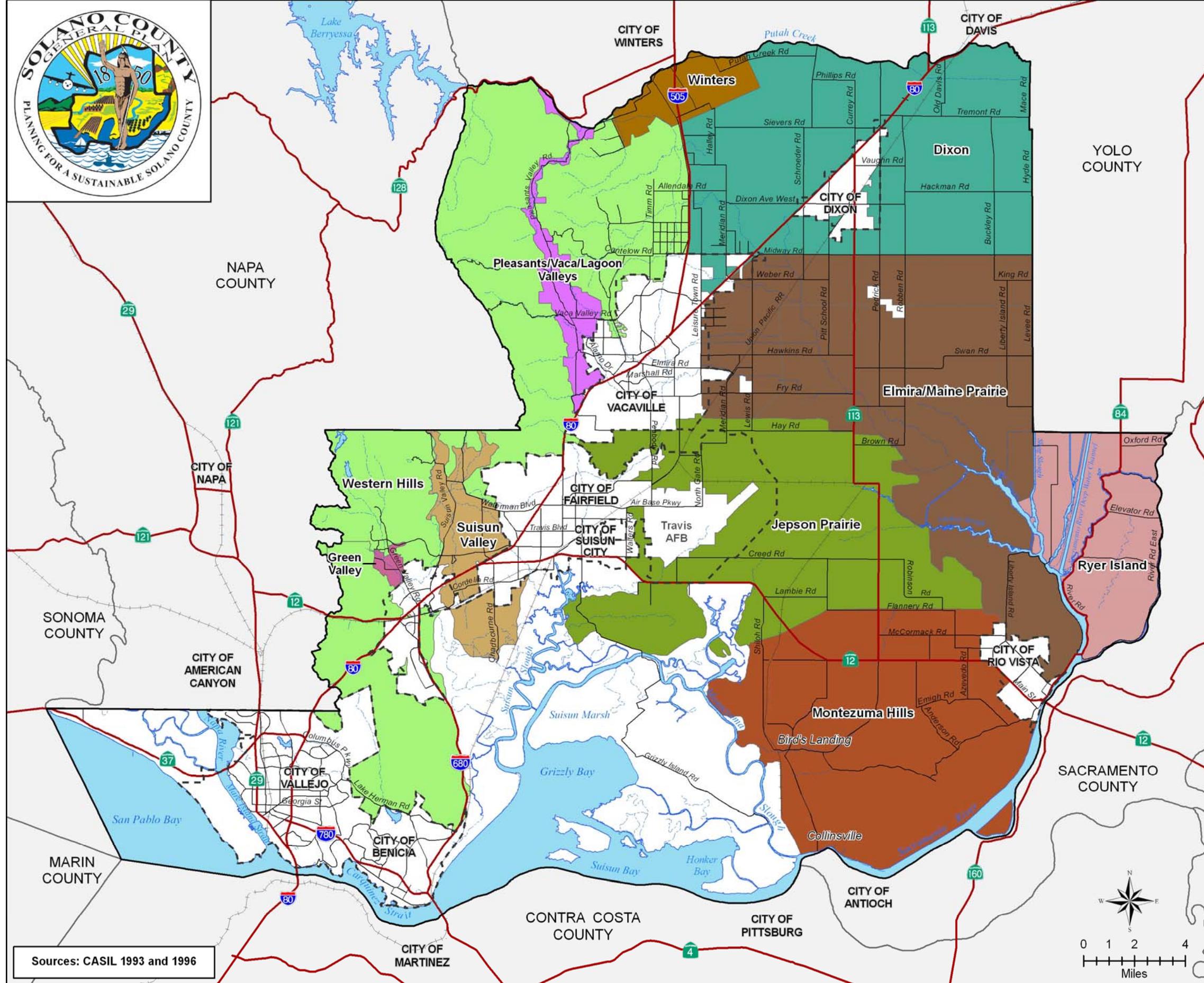
Both the University of California Agricultural Issues Center and the CAC Agricultural Subcommittee gathered input from local farmers and landowners. Several strategies were repeatedly discussed and addressed in community meetings, letters, and interviews. These included:

- marketing, including region-specific marketing of agricultural products;
- streamlining of existing agricultural regulations;
- infrastructure and transportation, including the need for improved road safety and maintenance, the need for maintaining water flows for irrigation, and the role of I-80 as a barrier between nearby farm fields;
- taxes and fees, including assessment values for agricultural lands;
- economics, including the need to increase the local value-added component to agriculture through tools such as local processing and sales; and
- compatibility conflicts between the county's agricultural and urbanized areas.

Many landowners and producers want the County to aid them in addressing these issues.

Agriculture is a highly dynamic and rapidly changing industry. The 10 agricultural regions represent a snapshot in time and reflect agricultural conditions present in the county at the time of the General Plan update. The agricultural characteristics that make these areas distinct regions also affect marketing and economic characteristics. For these reasons, the County believes that regions should be treated as units and specific policies should be used to address issues where they are unique to a region.

Marketing efforts should be targeted for each region. This could be accomplished through strategic action plans. County planning and ombudsman positions could assist regions in creating strategic plans or helping with other economic or marketing needs. These plans may differ in complexity depending on the regional needs, ranging from a few additional policies and action programs to a special study area process. Many of the policies developed within the Suisun Valley Special Study Area process are included in this section, although some have been adapted to apply to multiple regions.



Solano County General Plan
Figure AG-4
Agricultural Regions

Legend

Agricultural Region
Dixon Ridge
Elmira/Maine Prairie
Green Valley
Jepson Prairie
Montezuma Hills
Pleasants/Vaca/Lagoon Valleys
Ryer Island
Suisun Valley
Western Hills
Winters

Basemap Layers
Roadways
Highways
Railroads
Streams and Creeks
Major Water Features
Municipal Service Areas
Adjacent Counties

"Planning for a Sustainable Solano County"

The following section contains descriptions of 10 proposed agricultural regions and policies that are unique to an individual region or group of regions. The minimum lot sizes and general uses presented in Table AG-3 should be used in conjunction with the agriculture land use description from the Land Use chapter to define the General Plan land use description for agricultural lands in the county's 10 agricultural regions.

Table AG-3
Agricultural Regions

Agricultural Region	Minimum Lot Size	General Uses
Winters	40 acres	Provides for agricultural production, agricultural processing facilities, facilities to support the sale of produce, and tourist services that are ancillary to agricultural production.
Dixon Ridge	40 acres	Provides for agricultural production, agricultural processing facilities, and agricultural services.
Elmira and Maine Prairie	40 acres – northwest portion (Elmira) 80 acres – southeast portion (Maine Prairie) See Figure AG-5	Provides for agricultural production, agricultural processing facilities, and agricultural services.
Montezuma Hills	160 acres	Provides for agricultural and energy production.
Ryer Island	80 acres	Provides for agricultural production.
Suisun Valley	20 acres	Provides for agricultural production, agricultural processing facilities, facilities to support the sale of produce, and tourist services that are ancillary to agricultural production.
Green Valley	20 acres	Provides for agricultural production. A future Specific Plan required for Middle Green Valley will further detail desired agricultural uses and lot sizes.
Pleasants, Vaca, and Lagoon Valleys	40 acres – Parcels with current A-40 zoning 20 acres – Parcels with current A-20 zoning See Figure AG-6	Provides for agricultural production and facilities to support the sale of produce and tourist services that are ancillary to agricultural production.
Jepson Prairie	160 acres	Provides for agricultural production.
Western Hills	160 acres – West of Pleasants Valley Road 20 acres – East of Pleasants Valley Road and in the Tri-City and County area See Figures AG-7 and AG-8	Provides for agricultural production.

The plan seeks to ensure that uses which occur in agricultural areas are compatible with the continued agricultural operation of the area. Agricultural service uses should be limited to those uses where a rural location to service agriculture is necessary. In regions that do not allow for agricultural service uses, only those uses compatible with continued agricultural operations should be allowed. Such uses include limited recreational opportunities in designated areas and limited industrial development in the central County area. Rural residential uses should be confined to areas designated for such uses to minimize potential conflicts.

Winters

Winters is a 6,474-acre area in the northwest portion of the county, where it borders Yolo County. The area produces primarily orchard crops, including walnuts, almonds, and plums. Local agricultural processing is important in this region, which experiences strong pressure toward urbanization because of its location on I-505, and interest from Bay Area commuters to purchase orchard land for rural residences.

The Winters region is a vital area for both Solano and Yolo Counties. The tree-based economy in this area spans the border between the two counties. Winters contains some of the most valuable agricultural land in the county and is second only to Suisun Valley in market value of land.

Dixon Ridge

The 63,436-acre Dixon Ridge region, located in the northeastern corner of the county, contains some of the best farmland in the region. Most of the Dixon Ridge region is in production for field crops, such as tomatoes, alfalfa, and safflower. This area is also home to two of the few agricultural processing facilities in the county: the Campbell Soup plant and Superior Meat. This area is relatively flat and divided by I-80, which runs southwest to northeast.

Elmira and Maine Prairie

The Elmira and Maine Prairie region, which borders the city of Vacaville to the west and Jepson Prairie and Dixon to the south and north, is primarily planted with field crops. Some grazing is present and is more prominent toward the south. It occupies 75,358 acres. Crops grown in this area include alfalfa, corn, and wheat and are mainly sold to dairies throughout the region.

Although this region is a single unit for purposes of marketing and economic development, it is split into two portions to maintain the existing minimum agricultural parcel sizes. The split between Maine Prairie and Elmira is shown in Figure AG-5.

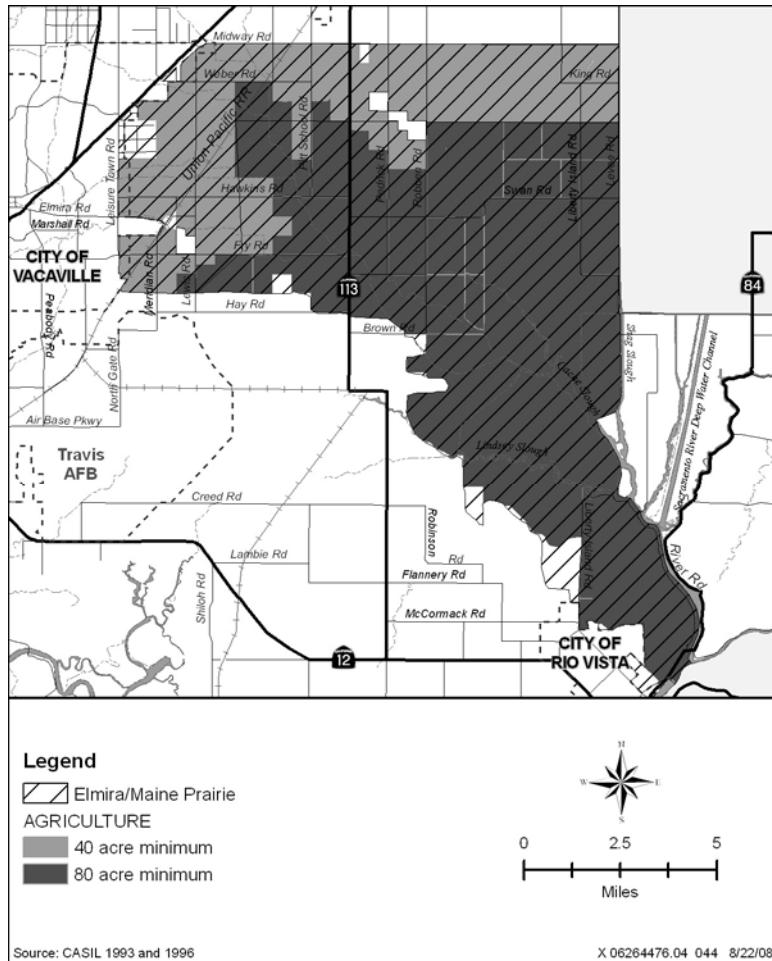


Figure AG-5
Elmira and Maine Prairie Minimum Lot Sizes

Montezuma Hills

The Montezuma Hills region is a mix of grazing land and cropland. Sheep are grazed on the hillsides in a crop rotation system which includes the growing of small grains such as oats and barley and a fallow period. This area is approximately 58,035 acres and is also used for energy production. With high wind speeds and natural gas deposits, landowners are able to supplement their incomes through productive gas wells and wind turbines. Other energy producing options may also be considered. This area is experiencing some urbanization pressure around Rio Vista as the city begins to expand. Increasing the agricultural value-added component through processing and sales is particularly important in this area.

Ryer Island

Ryer Island is located in the southeastern most corner of the county and is characterized by fertile soils and little development. Farmers in the area produce primarily field crops that are tolerant of spring flooding. Some producers have planted wine grapes and orchards as well.

Agriculture Chapter

The island is isolated from major transportation corridors and access to the island is provided only by a narrow bridge or by ferry. Most of the crops grown on the island are transported to and processed in San Joaquin, Sacramento, and Yolo Counties.

Suisun Valley

Suisun Valley is located between Fairfield and Cordelia, east of the Napa Hills, and south of the Napa County border. Most land in this area is in agricultural use, producing grapes for wine, small grains, or other fruit crops. Three intersections in this area contain commercial establishments: Mankas Corners, Rockville Corners, and Rockville Road/I-80. Suisun Valley could provide a unique opportunity for the County to promote agri-tourism, specifically as a destination for visitors interested in local wine production, farm stands, and rural atmosphere while avoiding the traffic of the nearby Napa and Sonoma areas. The area was part of a special study area and was the focus of a community workshop planning process. Goals and policies specific to the Suisun Valley are found in the Land Use chapter.

Green Valley

Agricultural land in Green Valley is somewhat limited. This area was historically home to small orchards but many producers are beginning to grow wine grapes. The area was part of a special study area. Middle Green Valley was the focus of a community workshop planning process. Goals and policies specific to Middle Green Valley are found in the Land Use chapter. The County will prepare a specific plan for the Green Valley region in cooperation with local residents and landowners.

Jepson Prairie

The Jepson Prairie region occupies 52,943 acres and is used primarily for grazing cattle and sheep. It contains low hills and vernal pool habitat. Increasing the agricultural value-added component through processing and sales is particularly important in this area.

Pleasants, Vaca, and Lagoon Valleys

The 4,341-acre Pleasants, Vaca, and Lagoon Valleys region is the most diverse agricultural region in the county. The University of California Agricultural Issues Center study describes the produce of this area as "Small-Scale Commodity and Niche Agriculture." The high-quality soils found in this area support everything from horse and livestock operations to wine grapes and organic produce. The parcels are smaller than those in other regions, and they do not support large-scale operations. The area experiences urbanization pressures as the city of Vacaville continues to grow. An increased use of conservation easements and increased marketing of local produce are important to this region. Minimum lot sizes are shown in Figure AG-6.

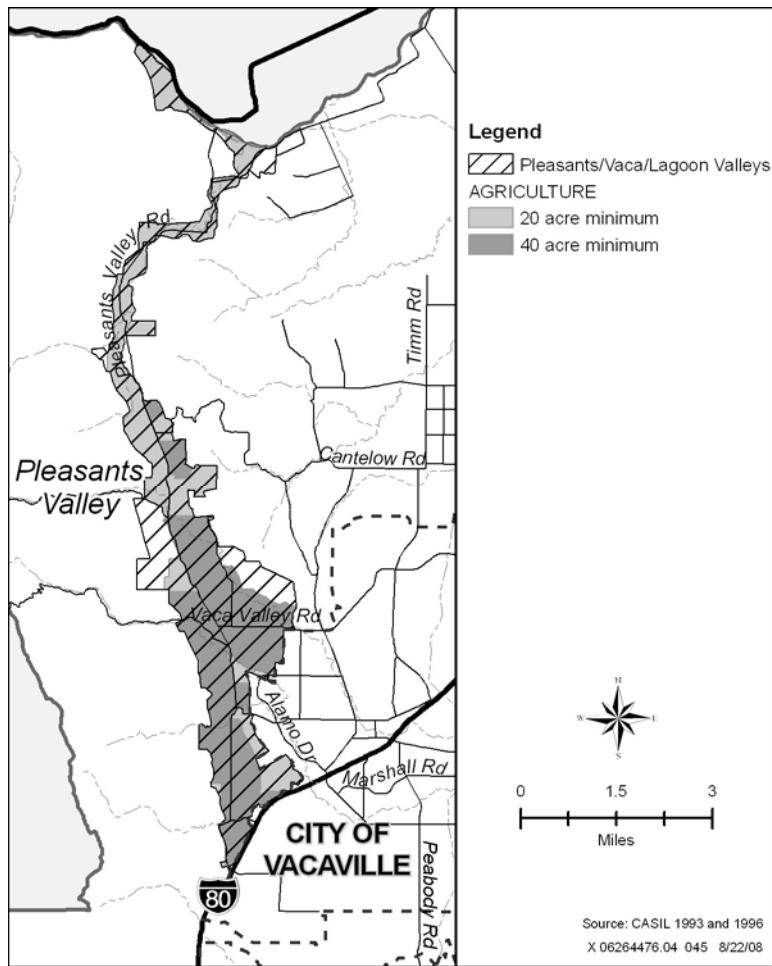


Figure AG-6
Pleasants, Vaca, Lagoon Valleys Minimum Lot Sizes

Western Hills

The Western Hills region is characterized by grasslands, oak woodlands, and mountain plateaus. The steep slopes and soil types currently limit the productive use of this land primarily to grazing. Most of the Western Hills region is in the Watershed land use designation. Minimum lot sizes are shown in Figures AG-7 and AG-8.

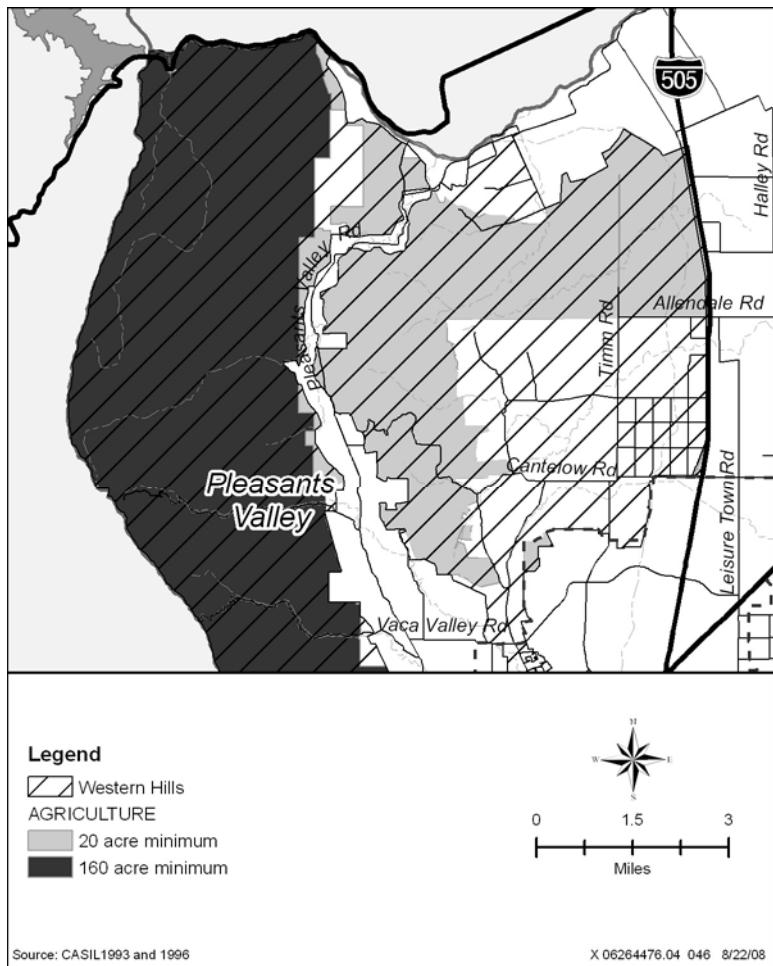


Figure AG-7
Western Hills Minimum Lot Sizes

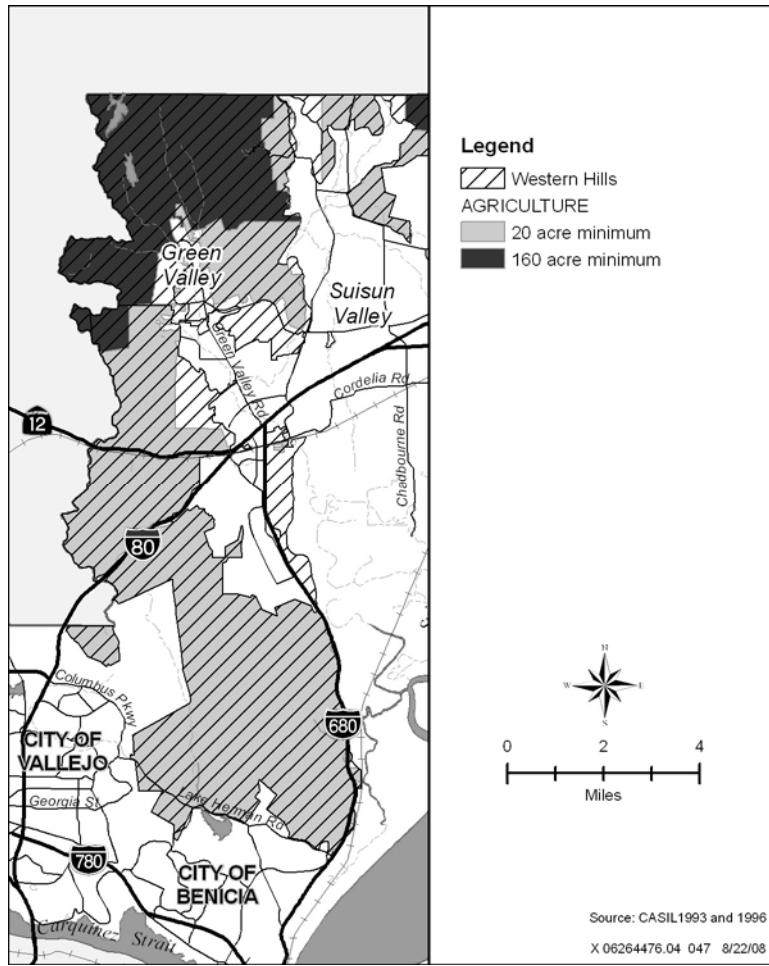


Figure AG-8
Western Hills – Tri-City & County Area Minimum Lot Sizes

GOALS

Four strategies for agriculture are articulated through the General Plan.

- Ensuring that agriculture endures as an essential part of Solano County's identity and lifestyle;
- Maintaining and promoting agriculture as an important business and major contributor to Solano County's economy;
- Preserving additional values of agricultural land, including important scenic value within the rural environment, providing habitat, providing options for recreation, and serving as community separators defining the county's distinct cities; and
- Providing opportunities for agriculture to serve as an educational tool and tourist draw.

Agriculture Chapter

The goals and policies of this chapter are intended to provide a framework for achieving the agricultural vision.

-
- AR.G-1:** Recognize, value, and support the critical roles of all agricultural lands in the stability and economic well-being of the county.
 - AR.G-2:** Preserve and protect the county's agricultural lands as irreplaceable resources for present and future generations.
 - AR.G-3:** Support the ability of farmers to earn sufficient income and expand the county's agricultural base by allowing for a wide range of economic activities that support local agriculture.
 - AR.G-4:** Enable the development of housing opportunities for farm families and farmworkers to ensure the continued competitiveness of Solano County agriculture.
 - AR.G-5:** Reduce conflict between agricultural and nonagricultural uses in Agriculture-designated areas.
 - AR.G-6:** Recognize, support, and sustain agricultural water resources for farmlands.
 - AR.G-7:** Preserve and enhance the landscape and economy of the Vaca, Pleasants, Lagoon, and Suisun Valleys as rural agricultural communities.
 - AR.G-8:** Seek to increase the value-added component of the county's agricultural economy to a level that meets or exceeds the state average.

POLICIES

The following policies apply to all lands designated Agriculture on the Land Use Diagram.

-
- AG.P-1:** Ensure that agricultural parcels are maintained at a sufficient minimum parcel size so as to remain a farmable unit. Farmable units are defined as the size of parcels a farmer would consider viable for leasing or purchasing for different agricultural purposes. A farmable unit is not considered the sole economic function that will internally support a farm household.
 - AG.P-2:** Ensure that residential development is compatible with surrounding agricultural activities.
 - AG.P-3:** Encourage consolidation of the fragmented pattern of agricultural preserves and contracts established under the Land Conservation Act (Williamson Act) and the retention

- of agricultural preserves and contracts in agricultural, watershed, and marshland areas.
- AG.P-4: Require farmland conversion mitigation for either of the following actions:
- a. a General Plan amendment that changes the designation of any land from an agricultural to a nonagricultural use or
 - b. an application for a development permit that changes the use of land from production agriculture to a nonagricultural use, regardless of the General Plan designation.
- AG.P-5: Create an Agricultural Reserve Overlay designation on the Land Use Diagram that identifies an agricultural mitigation bank area in which the County will encourage private landowners to voluntarily participate in agricultural conservation easements.
- AG.P-6: Encourage eligible property owners to participate in a County-led agricultural preserve program.
- AG.P-7: Explore and if feasible implement a voluntary transfer of development rights program to help protect agricultural resources by guiding development to more suitable areas.
- AG.P-8: Maintain water resource quality and quantity for the irrigation of productive farmland so as to prevent the loss of agriculture related to competition from urban water consumption internal or external to the county.
- AG.P-9: Promote efficient management and use of agricultural water resources.
- AG.P-10: Support efforts by irrigation districts and others to expand the county's irrigated agricultural areas where appropriate.
- AG.P-11: Support agricultural production by enabling the development of adequate amounts of farmworker and farm family housing in agricultural areas that meet state housing quality standards.
- AG.P-12: Promote agriculture as a major county industry and support marketing efforts for Solano County-grown and value-added products and agricultural services and compatible activities.
- AG.P-13: Support changes in local, state and federal taxing structures that promote the retention of production agriculture and the beneficial use of agricultural byproducts.

Agriculture Chapter

- AG.P-14: Support and promote streamlined permit processing procedures for agriculture-related buildings on Agriculture designated parcels (including barns, farm stands, and agricultural processing plants).
- AG.P-15: Permit limited agricultural service uses that support local agricultural activities and are not harmful to the long-term agricultural use in the surrounding area. These support services should be located in areas designated Limited Industrial and Agriculture as depicted on the Land Use Diagram.
- AG.P-16: Minimize potential conflicts between agricultural and residential uses by encouraging the use of urban-agricultural buffers within city municipal service areas between residential uses and agricultural lands.
- AG.P-17: Minimize potential conflicts between automobile and bicycle traffic and agricultural operations through transportation planning and capital improvement efforts.
- AG.P-18: Support long-term viability of commercial agriculture and discourage inappropriate development of agricultural lands within the Delta.
- AG.P-19: Require agricultural practices to be conducted in a manner that minimizes harmful effects on soils, air and water quality, and marsh and wildlife habitat.
- AG.P-20: Protect, encourage, and provide incentives to agricultural processors that serve local/regional markets.
- AG.P-21: Promote natural carbon sequestration to offset carbon emissions by supporting sustainable farming methods (such as no-till farming, crop rotation, cover cropping, and residue farming), encouraging the use of appropriate vegetation within urban-agricultural buffer areas, and protecting grasslands from conversion to non-agricultural uses.
- AG.P-22: Work with property owners and law enforcement to address illegal dumping.
- AG.P-23: Support recreation and open space activities that are complementary and secondary to the primary agricultural activities on the land.
- AG.P-24: Continue to support nursery crop industries at locations with favorable growing conditions and transportation access.
- AG.P-25: Facilitate partnerships between agricultural operations and habitat conservation efforts to create mutually beneficial outcomes. Although such partnerships are to be

encouraged throughout the county, additional emphasis should be focused in locations where the Resource Conservation Overlay and Agricultural Reserve Overlay coincide.

Regional Policies

-
- AG.P-26: Acknowledge the 10 agricultural regions and address them in unique ways that support the maintenance and expansion of profitable agricultural production.
- AG.P-27: Use the regions to direct marketing or economic efforts. Encourage landowners, producers, and agencies in a region to work together to create strategic action plans.
- AG.P-28: Recognize that agriculture is to be the predominant land use in the Dixon Ridge, Elmira and Maine Prairie, Montezuma Hills, Ryer Island, and Winters regions. These are agricultural areas where preservation efforts should be focused and conflicting land uses avoided.
- AG.P-29: Support the unique agricultural uses found in the interior valleys (Suisun, Pleasants, Vaca, and Lagoon) and encourage the development of complementary agri-tourism, processing, and commercial uses in these regions.
- AG.P-30: Recognize the diversity in individual regions, beyond the broad guidance provided for each region.
- AG.P-31: Define parcel size of Agriculture designated lands based on the "Agricultural Regions" section as described in this chapter and presented in Table AG-3.

One residence and a permitted secondary unit may be built on a lot of record existing as of January 1, 1984, designated "Agriculture" provided however that (i) the owner demonstrates compliance with all other applicable County requirements, and (ii) before such exemption is granted, the lot has first been merged with contiguous parcels to the maximum extent possible consistent with state law.
- AG.P-32: Lands within the "Agriculture" designation shown on the Land Use Diagram may be redesignated to a more intensive agricultural designation, or to a rural residential designation (with a maximum density of one unit per 2.5 to 10 acres) if the Board of Supervisors makes each of the following findings:

(a) That the approval will not constitute part of, or encourage, a piece-meal conversion of a larger agricultural area to residential or other non-agricultural

uses, and will not alter the stability of land use patterns in the area;

- (b) That no land proposed for redesignation is prime agricultural land as defined pursuant to California Government Code Section 51201 (the California Land Conservation Act of 1965, also known as the Williamson Act);
- (c) That the subject land is unsuitable for agriculture due to terrain, adverse soil conditions, drainage, flooding, parcel size, or other physical factors, such that it has no substantial market or rental value under the "Agriculture" designation;
- (d) That the use and density proposed are compatible with agricultural uses and will not interfere with accepted farming practices;
- (e) That the land is immediately adjacent to existing comparably developed areas and the applicant for the redesignation has provided substantial evidence that the Fire District, School District, County Sheriff, the area road system, and the proposed water supplier have adequate capacity to accommodate the development and provide it with adequate public services; and
- (f) That annexation to a city or incorporation is not appropriate or possible based on the following factors: nearby cities' designated sphere of influence boundaries, cities' general plan growth limits and projections, and comprehensive annexation plans.

All redesignations pursuant to this policy shall be limited to a maximum of 160 acres for any one landowner in any calendar year. Landowners with any unity of interest are considered one landowner for purposes of this limitation.

AG.P-33:

To comply with state law regarding the provision of low-and very-low income housing as those terms are or may be defined by state law, lands within the "Agriculture" designation on the Land Use Diagram may be changed to a residential designation. No more than 50 acres of land may be redesignated for this purpose in any calendar year. Such redesignation may be made only upon each of the following findings:

- (a) The findings stated in subparagraphs (e) and (f) in AG.P-32 above are met;
- (b) Use of the land redesigned under this policy will be limited to a low- and very-low income housing

development, pursuant to a legally valid Housing Element of this General Plan;

- (c) There is no existing residential designated land available for the low- and very-low income housing; and
- (d) The redesignation of lands, and construction of low- and very-low income housing on those lands, is required to comply with state law requirements for provision of such housing.

AG.P-34: Lands within the Agriculture designations may be redesignated to Park & Recreation only for public recreation and public open space uses and only if the uses permitted by the new designation will not interfere with or be in conflict with agricultural operations.

AG.P-35: Lands within the Agriculture designations may be redesignated to Watershed or Marsh.

AG.P-36: Lands designated Watershed.

- (a) Within the Watershed land use designation, the maximum permitted residential density is one dwelling unit per 160 acres.
- (b) Notwithstanding the preceding paragraph, one residence may be built on a lot of record existing as of January 1, 1984, designated Watershed provided however that (i) the owner demonstrate compliance with all other applicable County requirements, and (ii) before such exemption is granted, the lot has first been merged with contiguous parcels to the maximum extent possible consistent with state law.

IMPLEMENTATION PROGRAMS

The 10 agricultural regions will emphasize different implementation programs, based on their distinct regional needs. The following list of programs is intended to serve as a toolbox for the regions' future strategic plans.

Regulations

AG.I-1: Create and adopt a farmland conversion mitigation program and ordinance. Require compensation for loss of agricultural land. Establish appropriate mitigation ratios for the program or utilize a graduated mitigation mechanism. The mitigation ratio shall be a minimum of 1.5:1 (1.5

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acres of farmland protected through mitigation for each acre of farmland converted). The program shall not present regulatory barriers to agritourism, agricultural services, and agricultural processing in regions and within land use designations where such uses are permitted and encouraged. The program shall also establish mitigation within the same agricultural region as the proposed development project, or within the Agricultural Reserve Overlay district, as a preferred strategy. The program shall incorporate a fee option, and shall provide an exemption for farmworker housing. Mitigation lands shall be of similar agricultural quality to the lands being converted.

Related Policies: AG.P-4, RS.P-62

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ordinance adopted by 2010; Implementation ongoing

AG.I-2: Adopt ordinances and policies to support development of an Agricultural Reserve Overlay district. Include lands with highest agricultural value, based on soil classifications, irrigation, and surrounding uses. Work with local farmers and ranchers to generate support for using the overlay district as a receiving area for the farmland conversion mitigation program.

Related Policies: AG.P-5, RS.P-62

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Mitigation program and ordinance adopted by 2010; Zoning Ordinance updated by 2012; Implementation ongoing

AG.I-3: Study, and if feasible establish, a program to provide seasonal farmworkers with mobile housing that could be located on any specific parcel during the cultivation and harvest periods. Establish regulations and an inspection process (or coordinate inspections with the state Department of Housing and Community Development) that ensure the health, safety, and welfare of agricultural employees.

Additionally, support development of low- and very-low-income housing on agricultural lands, if criteria in policy AG.P-33 are met.

Related Policy: AG.P-11

Agency/Department: Department of Resource Management; UC Davis Cooperative Extension

Funding Source: General Fund

Time Frame: Ongoing

AG.I-4: Revise the agricultural zoning districts and other relevant sections of the County code to facilitate agricultural processing facilities and uses by region. Establish an incentive program to encourage development of local processing capacity to serve local and regional markets. The Zoning Ordinance and other relevant sections of the County code shall permit the establishment of limited agricultural support services in areas designated as Limited Industrial and Agriculture. Remove barriers to agricultural development by streamlining the permitting process for agriculture-supporting uses, including, but not limited to, barns, farm stands, and agricultural processing plants. Consider creating a separate permitting fee structure for these types of projects to promote investment in agricultural improvements.

The updated Zoning Ordinance shall include provisions for incidental recreational use of lands designated for agriculture.

Related Policies: LU.P-32, AG.P-5, AG.P-14, AG.P-15, AG.P-20, AG.P-24

Agency/Department: Department of Resource Management; Agricultural Commissioner

Funding Source: General Fund

Time Frame: Code updates completed by 2012; Implementation ongoing

AG.I-5: Work with cities to establish appropriate urban-agricultural buffers where new residential uses within municipal service areas may conflict with agricultural uses. Urban-agricultural buffers shall be an appropriate size to meet desired objectives, but in no case less than 300 feet in width. The buffer

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should occur on developing parcels located within municipal service areas to the extent feasible; be managed by the landowner, developer, homeowner's association, or a special purpose district; and favor protection of the maximum amount of farmable land.

Related Policies: AG.P-16, RS.P-70

Agency/Department: Department of Resource Management

Funding Source: Development fees

Time Frame: Ongoing

AG.I-6: Commission a study of County agricultural and land use regulations and their implementation with the intent of minimizing the regulatory obstacles to value-added opportunities for local agriculture. In addition to examining the substance of regulations and relevant county fees, the study should:

- examine their administration, seeking ways to make the application and review process more efficient, economical, and less time consuming;
- examine how the burdens of state- and federal-originated requirements can be modified in their local implementation; and
- examine ways the County can more proactively participate in the formulation and development of new state and federal regulations affecting agriculture, particularly Agricultural Enterprise Zones, water quality regulations, and water transfers from agricultural to urban use.

Related Policies: AG.P-13, AG.P-14

Agency/Department: Department of Resource Management; Agricultural Commissioner; UC Davis Cooperative Extension

Funding Source: Grant funds; General Fund

Time Frame: Study completed by 2015

Funding, Physical Improvements, and Capital Projects

AG.I-7: Provide incentives for landowners to participate in the Williamson Act and Farmland Security Zone

programs, including subsidy of application filing fees and assistance with the application process. Develop a conservation plan aimed at consolidating agricultural preserves and Williamson Act contracts to maintain large parcel sizes needed for productive agriculture. Ensure that agricultural parcels are maintained at a minimum parcel size sufficient to remain a farmable unit. Pursue grant funds under the provisions of the California Farmland Conservancy Program to assist with implementation of this and other measures contained in this chapter.

Related Policies: AG.P-1, AG.P-5

Agency/Department: Department of Resource Management; Agricultural Commissioner; UC Davis Cooperative Extension

Funding Source: Grant funds; General Fund

Time Frame: Williamson Act Conservation Plan completed by 2010; Implementation ongoing

AG.I-8: In coordination with programs in the Transportation and Circulation chapter, create a comprehensive plan for roadway improvements to support agricultural needs. The plan shall include increased connectivity across I-80 for farmers and their equipment, turnouts on agricultural roads, and grading/paving of unimproved roads. The plan shall also provide strategies to reduce automobile and bicycle conflicts with agricultural operations throughout the county. Recommendations shall be integrated into County transportation plans, recreation plans, and capital improvement programs. Partner with cities and the Solano Transportation Authority to address funding strategies for planned facilities.

Related Policies: AG.P-17, TC.P-26

Agency/Department: Department of Resource Management; Solano Transportation Authority

Funding Source: Grant funds; General Fund

Time Frame: Comprehensive Transportation Plan completed by 2015; Implementation ongoing

AG.I-9: Investigate funding sources to facilitate increased enforcement of dumping regulations, removal of illegally dumped materials, and public education on this topic.

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Related Policy: AG.P-22

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Development Review

AG.I-10: Focus preservation efforts, including use of Williamson Act contracts and conservation easements, in areas where agriculture is to be the predominant land use. Maintain large minimum parcel sizes in these regions, and discourage rezoning that would negatively affect farming operations. Recognize that agriculture is to be the predominant land use in the Dixon Ridge, Elmira and Maine Prairie, Montezuma Hills, Ryer Island, and Winters regions. Support long-term viability of commercial agriculture and discourage inappropriate development of agricultural lands within the Delta.

Related Policies: AG.P-3, AG.P-18, AG.P-28

Agency/Department: Department of Resource Management

Funding Source: Development fees; General Fund

Time Frame: Ongoing

AG.I-11: Do not require design review for barns and similar agricultural support structures unless design review is mandated by a local community plan, such as a specific plan, design guidelines, zoning, or a city's general plan.

Related Policy: AG.P-14

Agency/Department: Department of Resource Management

Funding Source: Development fees

Time Frame: Ongoing

AG.I-12: Update the Zoning Ordinance and Subdivision Ordinance to incorporate standards and guidelines for the placement of residential uses on agricultural land. These may include:

- limiting the size of the homesite portion of a parcel to maximize the land available for commercial agriculture,
- locating the homesite at the corner or other appropriate location on the parcel to support other agricultural operations, and
- requiring the purchaser to show how the property can still be used for agricultural production and supporting activities.

Related Policy: AG.P-11

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Zoning Ordinance and Subdivision Ordinance updates completed by 2012; Implementation ongoing

AG.I-13: Support recreation and open space activities that are complementary and secondary to agricultural activities on the land. Encourage agriculturalists to incorporate compatible recreational and educational activities that provide visitor-oriented opportunities into agricultural land in appropriate areas, minimizing the adverse impact on agriculture.

Related Policies: AG.P-23, RS.P-46, RS.P-47

Agency/Department: Department of Resource Management

Funding Source: Development fees

Time Frame: Ongoing

AG.I-14: Implement the Orderly Growth Initiative by:

- defining the parcel size of Agriculture-designated lands as presented in Table AG-3,
- limiting redesignation of Agriculture-designated lands to a more intensive agricultural designation or residential designation as defined in policies AG.P-30 and AG.P-31,
- redesignating Agriculture-designated lands to Park and Recreation only for public uses and only if the uses permitted will not interfere with or be in conflict with agricultural operations,

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- redesignating Agriculture-designated lands to Watershed or Marsh if appropriate, and
- ensuring that lands designated Watershed will have maximum permitted residential densities as defined in policy AG.P-34.

Related Policies: AG.P-31, AG.P-32, AG.P-33, AG.P-34, AG.P-35, AG.P-36

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach, and Education

AG.I-15: Investigate methods to change state and federal tax and fee structures and to promote beneficial use of agricultural byproducts through changes to state legislation.

Related Policy: AG.P-13

Agency/Department: Agricultural Commissioner; Board of Supervisors; Department of Resource Management; UC Davis Cooperative Extension

Funding Source: General Fund; Grant funds

Time Frame: Ongoing

AG.I-16: Develop marketing/ombudsman and planning functions that facilitate and promote agriculture in the county.

Related Policies: AG.P-12, AG.P-26, AG.P-27

Agency/Department: Department of Resource Management; Agricultural Commissioner

Funding Source: General Fund

Time Frame: Complete by 2009

AG.I-17: Develop strategic marketing and economic plans for each of the 10 agricultural regions. These plans should address the regions' specific needs and potential opportunities for agricultural economic growth, the marketing efforts the region wants to

accomplish, and what help the County can provide. Specific growth areas include creation of a Solano County-grown identity and support for value-added production. This should be achieved through policies and action steps/programs.

Develop locally led and individual marketing strategies for the unique and distinct agricultural regions based on local crop production and agricultural assets that allow the regions to develop independently of one another.

Recognizing the diversity in individual regions, support agriculture-related uses, such as agri-tourism development, processing plants, and some commercial uses in regions with unique agriculture (e.g., Suisun, Pleasant, Vaca, and Lagoon). Allow value-added production facilities and agriculture-related niche activities, such as bed and breakfasts at local wineries.

Related Policies: AG.P-27, AG.P-29, AG.P-30, RS.P-39

Agency/Department: Department of Resource Management; Agricultural Commissioner; UC Davis Cooperative Extension

Funding Source: General Fund; Grant funds

Time Frame: All regional strategic plans completed by 2018; Implementation ongoing

AG.I-18:	<p>Establish programs to preserve farmland, and encourage eligible property owners to participate in a County-led preserve program. Programs such as those listed below shall encourage maximum flexibility for agricultural operations:</p> <ul style="list-style-type: none">▪ A farmland conservancy program. Protect agricultural lands by purchasing development rights and conservation easements from willing sellers, and offer conservation easements or other innovative programs. Coordinate efforts with conservation organizations and other municipalities and agencies. The program shall incorporate a mechanism or strategy to provide just compensation for participating landowners and to prevent degraded agricultural property values. Proposed agricultural preserves shall avoid current and future roadway and transportation corridor alignments.
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- A voluntary transfer of development rights program in combination with the Agricultural Reserve Overlay. This program shall establish requirements and procedures for transfer of development rights from areas in the Agricultural Reserve Overlay to specified receiving areas. Receiving areas may be identified within a city through a joint powers agreement.
- A Farmland Security Zone program (Super Williamson Act). This program, in tandem with others in this section, will encourage the consolidation of the fragmented pattern of agricultural preserves and Williamson Act contracts, and the retention of these contracts in agricultural, watershed, and marshland areas.
- Prepare a public information brochure for distribution to the agricultural community to increase awareness of the benefits of participating in these programs.

Related Policies: AG.P-3, AG.P-4, AG.P-6, AG.P-7

Agency/Department: Department of Resource Management; Agricultural Commissioner; UC Davis Cooperative Extension

Funding Source: General Fund; Grant funds; Development fees

Time Frame: Ongoing

AG.I-19: Educate real estate professionals, county staff who enforce the ordinance, and prospective homeowners of dwellings or property close to agricultural activities regarding the protection from a nuisance action provided by the right-to-farm ordinance. Ensure that residential development is compatible with surrounding agricultural activities, including with the use of urban-agricultural buffers.

Related Policies: AG.P-2, AG.P-16

Agency/Department: Department of Resource Management; Agricultural Commissioner; County Counsel

Funding Source: General Fund

Time Frame: Ongoing

AG.I-20:	Create a small-scale, value-added agricultural committee, composed of successful small-scale producers, to advise county government on pertinent land use, permitting, and other issues.
Related Policy:	AG.P-14
Agency/Department:	Agricultural Commissioner; Board of Supervisors; Agricultural Advisory Committee; UC Davis Cooperative Extension
Funding Source:	General Fund
Time Frame:	Committee established by 2010
AG.I-21:	Promote and assist farmer and rancher participation in federal and state voluntary incentive programs aimed at improving wildlife habitat, wetlands, and environmental quality (e.g., Natural Resources Conservation Service Wildlife Habitat Incentives Program, Wetlands Reserve Program, Environmental Quality Incentives Program) Concentrate efforts in areas where the Agricultural Reserve Overlay and Resource Conservation Overlay coincide.
Related Policies:	AG.P-25, RS.P-62
Agency/Department:	Agricultural Commissioner; Department of Resource Management
Funding Source:	Grant funds
Time Frame:	Ongoing
AG.I-22:	Promote sustainable agricultural activities and practices that support and enhance the natural environment. These activities should minimize impacts on soil quality and erosion potential, water quantity and quality, energy use, air quality, and natural habitats. Sustainable agricultural practices should be addressed in the County's proposed Climate Action Plan to address climate change effects.
Related Policies:	AG.P-19, AG.P-20
Agency/Department:	Department of Resource Management; Agricultural Commissioner
Funding Source:	General Fund
Time Frame:	Climate Action Plan completed by 2010.

Coordination with Other Agencies and Organizations

AG.I-23: Work with the Solano County Water Agency, irrigation districts, reclamation districts, adjacent counties and the resource conservation districts to ensure adequate future water supply and delivery. Examine agricultural trends in surrounding communities and cooperate with adjacent counties in marketing and agricultural preservation practices. Review development proposals and require necessary studies, as appropriate, and water conservation and mitigation measures to ensure adequate water service. Examine the potential impact of water transfers from farmland to urban uses internal or external to the county and the implications for agriculture in the county. Create educational programs for farmers and ranchers that teach efficient water resource management. Explore options for expanding the county's irrigated areas. Working with the Solano County Water Agency, irrigation districts, reclamation districts, and the resource conservation districts, promote sustainable management and efficient use of agricultural water resources.

Related Policies: AG.P-8, AG.P-9, AG.P-10, PF.P-13, RS.P-76

Agency/Department: Department of Resource Management; Agricultural Commissioner

Funding Source: General Fund, Grant funds

Time Frame: Ongoing

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CHAPTER

4 RESOURCES

INTRODUCTION

Solano County's natural resources make it a great place to live or visit.



Solano Land Trust ©

Solano County lies at the intersection of numerous geographical and geological provinces that, together with variations in hydrology and climate, have resulted in the formation of unique and rare biological and ecological conditions and a rich diversity of native species and habitats. Solano County is home to both natural gas deposits and valuable wind resources. Its soils and water resources

contribute to a rich agricultural landscape. Home to generations of people, Solano County contains both substantial historic and prehistoric sites. Preservation and sustainable use of these resources are vital to the continued benefit and enjoyment of both current and future generations. The residents of Solano County strive to act wisely as stewards of these natural resources; therefore, it is important that the General Plan's goals, policies, and programs reflect this commitment.

In 2007, the Citizens' Advisory Committee (CAC) created a vision to guide future conservation and development efforts in Solano County. The vision includes the following statements regarding the county's resources:

We will focus on creative and innovative solutions to meet both human needs and the needs of the natural environment. Our respect for human and environmental needs will guide our land use decisions and where development takes place... We will use our natural habitat, farmlands, and water resources to maintain separation among our cities and unincorporated communities...

Because we value the quality of our air, soil, water, and other finite natural resources, we will continue to enhance agricultural business and preserve agricultural lands and resources. We will support practices that use renewable and recycled resources and reduce energy consumption and pollution as much as possible...

We will provide abundant and diverse recreation opportunities that are compatible with the natural environment yet provide our residents and visitors with an opportunity to enjoy nature...

By considering human and environmental needs equally, we can create a place where people may choose to live, work, and play within close proximity; a place where nature, farmlands, and water are valued...

This vision was used to develop the three major strategic directions within the Resources chapter of the General Plan:

- preserving the county's valued natural, cultural, and scenic resources;
- enhancing and restoring the natural environment and the county's diverse landscapes; and
- ensuring sustainable provision of energy, water, and mineral resources.

The chapter serves as a comprehensive policy and strategy guide, defining the County's path toward a sustainable future.

Purpose

The purpose of the Resources chapter is to identify the goals, policies, and implementation measures that will be used by the County in day-to-day decision making to protect natural, cultural, and open space resources. The chapter focuses on conserving, preserving, and enhancing these resources to ensure a high quality of life for current and future county residents.

Scope and Content

This chapter satisfies the state's requirement that all local government general plans include a Conservation Element and an Open Space Element. The California Government Code requires a Conservation Element for the conservation, development, and use of natural resources, including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals and other natural resources. Specifically, this chapter provides policies and programs to fulfill the following Conservation Element topics:

- protecting or improving water quality,
- preserving wetlands, including jurisdictional wetlands and saltwater and freshwater marshes consistent with federal and state requirements,
- protecting and developing in watersheds and aquifer recharge areas,

- conserving riparian vegetation,
- protecting special status species and their habitats,
- protecting wildlife movement corridors,
- conserving oak woodlands,
- promoting energy conservation and renewable energy, and
- implementing water conservation programs.

Remaining Conservation Element requirements are addressed in the Land use, Public Health and Safety, Agriculture, and Park and Recreation chapters.

The Open Space Element is used to manage all open space areas, including undeveloped wilderness lands and outdoor recreation uses. The California Government Code defines that open space should be preserved for the preservation of natural resources, managed production of resources, recreation, and public health and safety. Specifically, this chapter provides policies and programs to fulfill the following Open Space Element topics:

- preserving and creating community separator areas and protecting existing agricultural, open space, and recreational resources;
- protecting archaeological sites and historically or culturally important sites;
- protecting, improving, developing, and maintaining recreational trails and related facilities;
- integrating local trails with regional trail systems; and
- protecting local scenic highway corridors.

Remaining Open Space Element requirements are addressed within the Public Health and Safety, Agriculture, and Park and Recreation chapters.

This Resources chapter has three sections consisting of this introduction; the County's goals for protecting and sustainably using resources; and the context, policies, and implementation measures for each resource topic. Topics addressed in this chapter are:

- biological resources,
- marsh and delta areas,
- minerals,
- scenic resources,

- cultural resources,
- recreational resources,
- energy resources,
- community separators, and
- water resources and quality.

Relationship to Other General Plan Chapters

State planning law requires general plans to be internally consistent, meaning that statements in one section are in agreement with all other portions of the plan. The Resources chapter contains goals, policies, and programs closely related to those contained in the Land Use, Agriculture, and Public Health and Safety chapters. However, this chapter differs by being almost exclusively oriented toward natural resources.

The Land Use chapter defines a planned land use pattern, identifying natural resource, agricultural, residential, commercial, industrial, public use, special purpose, and overlay designations. Public and private lands intended for conservation, open space, and recreational purposes are identified on the Land Use Diagram using the Water Bodies and Courses, Park and Recreation, Marsh, Watershed, Agriculture, and Public/Quasi-Public land use designations. The Land Use chapter and diagram also present three overlay designations intended to further preservation of one or more resources, including a Resource Conservation Overlay to conserve biological resources, an Agricultural Reserve Overlay to promote consolidation of agricultural conservation easements and mitigation lands, a Tri-City and County Cooperative Planning area to promote conservation of open space resources, and the Vacaville-Fairfield-Solano Greenbelt to identify protected open space.

The Agriculture chapter provides goals and policies to protect the county's farmland resources. Many similarities exist between the policies in the Resources chapter and the Agriculture chapter, including policies regarding urban-agricultural buffers created to reduce conflict between adjacent land uses and community separators used to reinforce individual identity and physical separation of communities.

The Public Facilities and Services chapter addresses supply and use of resources and essential services, whereas the Resources chapter addresses their preservation and conservation. Water facilities and service and water resources and quality are closely linked. Policies in this chapter protect the water resources that are the foundation of a public water system. Energy resources and utilities are also closely related. The Resources chapter discusses energy resources within the county and various means of energy generation and conservation, whereas energy infrastructure and supply are discussed in the Public Facilities and Services chapter.

The Public Health and Safety chapter identifies hazard-prone areas such as floodplains and seismic and geologic hazard areas. Many of these areas also contain valued resources. For example, floodplains present a hazard to human lives and structures but often contain valued habitat for diverse species. Many areas in the western hills are unsuitable for development because of steep slopes and wildfire hazards, but are valuable scenic, habitat, and agricultural resources. This chapter will address the preservation and development of resources while the Public Health and Safety chapter policies are targeted at protecting people from the hazards associated with the same areas. The goals and policies in each section target distinct issues, but are coordinated with other chapters to ensure optimal outcomes.

GOALS

The goals and accompanying policies describe outcomes consistent with the following strategic directions described within the introduction to this chapter:

- preserving of the county's valued natural, cultural, and scenic resources;
- enhancing and restoring the natural environment and the county's diverse landscapes; and
- ensuring sustainable provision of energy, water, and mineral resources.

RS.G-1:	Manage and preserve the diverse land, water, and air resources of the county for the use and enrichment of the lives of present and future generations.
RS.G-2:	Ensure continued presence and viability of the county's various natural resources.
RS.G-3:	Repair environmental degradation that has occurred, and seek an optimum balance between the economic and social benefits of the county's natural resources.
RS.G-4:	Preserve, conserve, and enhance valuable open space lands that provide wildlife habitat; conserve natural and visual resources; convey cultural identity; and improve public safety.
RS.G-5:	Ensure availability of affordable energy supplies and require efficiency and conservation measures to minimize energy consumption.
RS.G-6:	Preserve the visual character and identity of communities by maintaining open space areas between them.

-
- RS.G-7: Ensure provision of an adequate, competitively priced and sustainable water supply and associated infrastructure to serve the needs of existing and future water users.
- RS.G-8: Achieve ongoing coordination between land use and water supply planning.
- RS.G-9: Protect, monitor, restore and enhance the quality of surface and groundwater resources to meet the needs of all beneficial uses.
- RS.G-10: Foster sound management of the land and water resources in Solano County's watersheds to minimize erosion and protect water quality using best management practices and protect downstream waterways and wetlands.

BIOLOGICAL RESOURCES

Planning Context

This section addresses biological resources and the actions that the County can take to maintain, protect, and preserve these resources. Biological resources encompass a wide range of species and natural communities found in the county, and the habitats that support them.

The county's location at the intersection of the San Francisco Bay and the Sacramento-San Joaquin Delta (Delta) and its varied topography has created a variety of habitat types. Examples of valued habitat include extensive areas of marshland and wetlands along the Bay and Delta, forests of the Coast Range, and vernal pool complexes and riparian corridors found throughout the upland areas of the county. These habitat types support numerous species including rare or threatened animal and plant species such as the California red-legged frog, Callippe butterfly, giant garter snake, Swainson's hawk, fairy shrimp, California tiger salamander, and Boggs Lake hedge-hyssop.



Fairy shrimp are a threatened species found in vernal pool areas.

The biodiversity of Solano County is notable. Forty species found within the county have been identified as rare, threatened, or species of special concern. Urban development, agriculture, roadway construction, hydrological alterations, and invasive species have had profound effects on the structure, composition, and function of ecosystems. Policies and programs directing sustainable approaches to each of these are vital to the continued viability of the county's biological resources. Biological resources also provide clean water; reduce urban heat island effects; pollinate crops and native vegetation; and fulfill cultural, spiritual, or intellectual needs.

The Delta and surrounding areas are among the most diverse ecosystems in the world. Studies comparing species richness and rarity have identified the greater San Francisco Bay region as one of the five most valuable biological areas within the United States and one of the 25 most valuable regions in the world.

Solano County has remained relatively undeveloped, with large portions of the county remaining in agriculture and open space. Sizeable areas of habitat and wildlife movement corridors allow viable populations to persist. If protected, these lands could continue to play an important role in maintaining biodiversity and ecosystem processes. Incentive-based programs, mitigation banks, conservation easements, and other land use planning tools can enable the sustained protection and enhancement of these resources.

Oak-dominated habitats support a wide variety of wildlife species; over 300 species of birds, mammals, reptiles and amphibians depend on them at some time in their life cycle.



Solano County's oak woodlands are a resource of great biological and scenic value. Oak woodlands are areas that contain native oak trees of a certain size. The woodlands provide habitat for a wide range of animal and plant species. Additionally, they moderate air and water temperatures, reduce soil erosion, facilitate nutrient cycling, and sustain water quality. Unfortunately

human pressures such as development, firewood harvesting, and agricultural conversions and natural effects such as the lack of oak regeneration and Sudden Oak Death threaten oak woodlands in the county and throughout the state.

Heritage trees are scenic resources for the county's residents and visitors. They are generally defined by their size, native origin, or historical value. Although heritage trees tend to be larger native tree species, individual communities provide guidelines on how to identify such trees through a special ordinance. These trees provide a sense of place, increase the aesthetics of our communities and roadways, reduce energy costs associated with air conditioning, and increase private property values.

Related Plans, Programs, and Agencies

Many plans and programs enacted by federal, state, and local legislation relate directly to biological resources policies and programs. These plans and programs are administered by agencies with powers to enforce federal, state, and local laws.

Federal Endangered Species Act

The federal Endangered Species Act (ESA) protects certain animal and plant species. Under the ESA, species are put on lists and categorized as endangered, threatened, proposed, or candidate. Endangered species are those that are in imminent danger of extinction while threatened species are those likely to be in danger of extinction. The lists are

maintained by, and protection of these species is enforced by, the United States Fish and Wildlife Service (USFWS). Actions that may result in "take" of a species are monitored and permitted by the USFWS. Take is broadly defined as an action that would "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in such conduct" listed species. Listed species are often called special-status species. Plants are not as heavily protected as animal species and are only protected when a take occurs on federal land or by federal action.

California Endangered Species Act

The California Endangered Species Act prohibits take of any species that the California Fish and Game Commission determines to be an endangered or threatened species. Federal and state lists of threatened and endangered species are generally similar; however, a species present on one list may be absent from the other. Regulations of the California Endangered Species Act are also somewhat different from the ESA in that the state regulations include threatened and endangered plants on nonfederal lands within the definition of take.

U.S. Fish and Wildlife Service and California Department of Fish and Game

Both USFWS and the California Department of Fish and Game (DFG) enforce regulations that protect wildlife resources. Special permits are required for alteration, dredging, or any activity in a lake or stream, as well as other activities that may affect fish and game habitat. Both agencies also regulate impacts on sensitive plant and animal species as described above. Future development in Solano County that has the potential to affect wildlife habitat will be subject to the regulations of both of these federal and state agencies.



Photo by USFWS

The tiger salamander tends to breed in semipermanent wetlands and is a threatened species in California, where its historic range is now fragmented.

Oak Woodlands Conservation Act

California's Oak Woodlands Conservation Act acknowledges the importance of private land stewardship to the conservation of the state's valued oak woodlands. The act established the California Oak Woodlands Conservation Program, which aims to conserve oak woodlands existing in the state's working landscapes by providing education and incentives to private landowners. The program provides technical and financial incentives to private landowners to protect and promote biologically functional oak woodlands.

Solano Multi-Species Habitat Conservation Plan

The Bureau of Reclamation, Solano County Water Agency (SCWA), and its eight member agency contracts, including the City of Vacaville, the City of Fairfield, Suisun City, the City of Vallejo, the Solano Irrigation District, and the Maine Prairie Water District, have agreed to implement conservation measures to ensure the protection of threatened and endangered species and their habitat within the SCWA service area.

Swainson's hawks breed in dry grasslands, and its habitat is found throughout Solano County. It is listed as a threatened species in California.



Photo by USFWS

The SCWA and member agencies developed the Solano Multi-Species Habitat Conservation Plan (HCP) for use within the Solano Project's contract service area and other participating areas of the county. The HCP is intended to support the issuance of an incidental take permit under the ESA for activities associated with future water use in these areas. HCP participants also intend to secure incidental take authorizations from DFG for state-listed species.

The HCP establishes a framework for complying with federal and state regulations for endangered species while accommodating future urban growth, development of infrastructure, and ongoing operations and maintenance activities associated with flood control, irrigation facilities, and other public infrastructure undertaken by or under the permitting authority/control of the HCP participants within the plan area. Covered activities under the HCP include development; irrigation district service area inclusions, expansions, and annexations; operation and maintenance activities of public facilities; recreation facilities and management; management, enhancement, habitat restoration/construction, monitoring, scientific collection, and associated compatible activities on designated reserves; mitigation sites/banks; open space lands and adjacent lands; and relocation of covered species.

The California red-legged frog is a threatened species in Solano County. A recovery plan focusing on the critical habitat areas was created by the USFWS.



Photo by USFWS

The data used within the General Plan to delineate habitat and natural communities are derived from the HCP. While the HCP identifies both priority and nonpriority habitat areas, the General Plan considers only the priority habitat areas for conservation and preservation. These include the following:

- California red-legged frog critical habitat and core recovery areas:** The recovery plan for the California red-legged frog published by USFWS designated portions of two recovery areas and critical habitats within Solano County. These consist of areas located in the hills west of Green Valley and the Tri-City and

County Cooperative Planning Area and in the Lake Berryessa area located in the extreme northwestern corner of the County.

- **Callippe butterfly priority conservation areas:** These consist of areas where the species is known to occur and additional areas that contain three habitat conditions necessary to support this species: Johnny Jump-up plants, adult nectar plants, and ridgelines or hilltop topography. The priority conservation areas are primarily located within the Tri-City and County Cooperative Planning Area east of Vallejo and Benicia.



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Habitat for the Callippe butterfly, an endangered species, is found in the western portion of the county.

- **Giant garter snake priority conservation areas:** These consist of areas in the eastern portion of the county that contain priority habitat for giant garter snake populations. The snakes use dense aquatic vegetation in freshwater marshes, oxbows, and backwaters of creeks as their primary habitat, though they can also be found in and adjacent to irrigation canals that support cattails or bulrushes. Additionally, upland areas are necessary so that the snakes can escape during flood periods.



© Eric Hansen

Giant garter snakes are found in the county's agricultural wetlands and other waterways. They are listed as a threatened species by the USFWS.

- **High value vernal pool conservation areas:** These consist of areas within the county characterized by seasonal wetlands that form in soil that cannot absorb the water because of dense clays or pans below the surface. These are primarily located in the Jepson Prairie area east of Fairfield and north of Vacaville between the English Hills and Interstate 505.



© 1986 California Native Plant Society

The Bogg's Lake hedge hyssop is listed as a *species of concern* by the USFWS and as *endangered* by the California Department of Fish and Game. It is found extensively across the Jepson Prairie growing in the clay deposits of vernal pools.

- **Priority habitat corridors:** These consist of linear habitat areas that connect two or more larger blocks of habitat. These corridors are proposed to conserve the viability of target wildlife populations in the habitat blocks.
- **Suisun Marsh Protection Plan Primary Management Zone:** Development in the Suisun Marsh Protection Plan Primary Management Zone is restricted by the *Suisun Marsh Protection Plan* administered by the San Francisco Bay Conservation and Development Commission (BCDC) and DFG.

These habitat areas are mapped in Figure RS-1. The priority habitat areas were used to create the Resource Conservation Overlay shown in Figure RS-2 and discussed in the Land Use chapter. The overlay indicates general locations of priority habitat and provides both opportunities and restrictions regarding the use of the underlying properties. The HCP also identifies priority wildlife movement corridors; however, because the specific locations of the corridors are uncertain, the corridors were not included in the Resource Conservation Overlay. Wildlife corridors are linear habitat areas that maintain "connectivity" and allow for the movement of species between remaining priority habitat areas. Because habitat is fragmented throughout the county, these corridors are essential to the long-term survival of many of the target species. The County will determine the specific locations and boundaries of these corridors in the future. The corridors must provide contiguous blocks of habitat, large and complex enough to maintain connectivity for the target species and natural communities. The County will consider these corridors during project review.

Policies

-
- | | |
|---------|---|
| RS.P-1: | Protect and enhance the county's natural habitats and diverse plant and animal communities, particularly occurrences of special-status species, wetlands, sensitive natural communities, and habitat connections. |
| RS.P-2: | Manage the habitat found in natural areas and ensure its ecological health and ability to sustain diverse flora and fauna. |
| RS.P-3: | Focus conservation and protection efforts on high-priority habitat areas depicted in Figure RS-1. |
| RS.P-4: | Together with property owners and federal and state agencies, identify feasible and economically viable methods of protecting and enhancing natural habitats and biological resources. |
| RS.P-5: | Protect and enhance wildlife movement corridors to ensure the health and long-term survival of local animal and plant populations. Preserve contiguous habitat areas |

to increase habitat value and to lower land management costs.

RS.P-6: Protect oak woodlands and heritage trees and encourage the planting of native tree species in new developments and along road rights-of-way.

Implementation Programs

Regulations

RS.I-1: Establish a resource mitigation overlay district within the Zoning Ordinance to site and permit mitigation banks. The ordinance should include incentives to focus mitigation banks within the Resource Conservation Overlay areas.

Related Policies: RS.P-1, RS.P-3

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: By 2011

RS.I-2: Use the Resource Conservation Overlay on the Land Use Diagram to identify areas of the county with high-priority needs for biological resource management. Areas covered by the Resource Conservation Overlay are intended to provide options to establish mitigation banks for biological impacts generated outside the overlay district. Land use designations within the Resource Conservation Overlay are restricted to Agriculture, Marsh, Watershed, and Park and Recreation. The Resource Conservation Overlay shall be located within important biological or physical areas and habitats identified by the HCP and deemed suitable by the Solano County Board of Supervisors. Areas contained within the Resource Conservation Overlay include high-priority resources defined in Figure RS-1 or subsequent updates.

The Resource Conservation Overlay contains the following resources:

- California red-legged frog critical habitat and core recovery areas
- Callippe butterfly priority conservation areas
- Giant garter snake priority conservation areas

- Priority habitat corridors
- Vernal pool conservation areas
- *Suisun Marsh Protection Plan* primary management zone

Update the Zoning Ordinance to incorporate provisions of the Resource Conservation Overlay.

Related Policies: RS.P-1, RS.P-3

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

RS.I-3: Develop and adopt an ordinance to protect oak woodlands as defined in Senate Bill (SB) 1334 and heritage oak trees.

Define heritage trees as the following: (a) trees with a trunk diameter of 15 inches or more measured at 54 inches above natural grade, (b) any oak tree native to California, with a diameter of 10 inches above natural grade, or (c) any tree or group of trees specifically designated by the County for protection because of its historical significance, special character or community benefit. As regards heritage oak trees, this ordinance should include:

- rules regarding the removal, pruning, or disturbance of the critical root zone of a heritage tree;
- replacement ratio for healthy tree removal; and
- enforcement mechanisms for unlawful removal of trees.

As regards oak woodlands, the ordinance should include:

- lists of targeted tree species and age classes;
- guidance to minimize the fragmentation of oak woodlands and provide linkages and corridors between stands; and
- requirements for the preparation of oak woodland management plans, which will be required for all development, agricultural uses

Resources Chapter

(including grazing), and timber/fire wood collection within the county's oak woodlands.

Related Policies: RS.P-1, RS.P-2, RS.P-6

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: By 2011

RS.I-4: Develop a program and ordinance to allow voluntary transfers of development rights from a property or properties located within a targeted resource area to a property or properties within designated receiving areas (areas more appropriate for development) where similar resource conflicts would not occur. Transfers of development rights would be possible on a voluntary basis from any designated sending area within the Resource Conservation Overlay.

This program should be developed in coordination with similar programs in the Agriculture and Land Use chapters; Program AG.I-18 and Program SS.I-1.

Related Policies: RS.P-1, RS.P-3

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Funding, Physical Improvements, and Capital Projects

RS.I-5: Develop a roadside tree program to plant and maintain native trees along road right-of-ways. Encourage private groups, nonprofits, and individuals to participate in native tree planting efforts through donations of time, trees, or funding.

Related Policy: RS.P-6

Agency/Department: Department of Resource Management

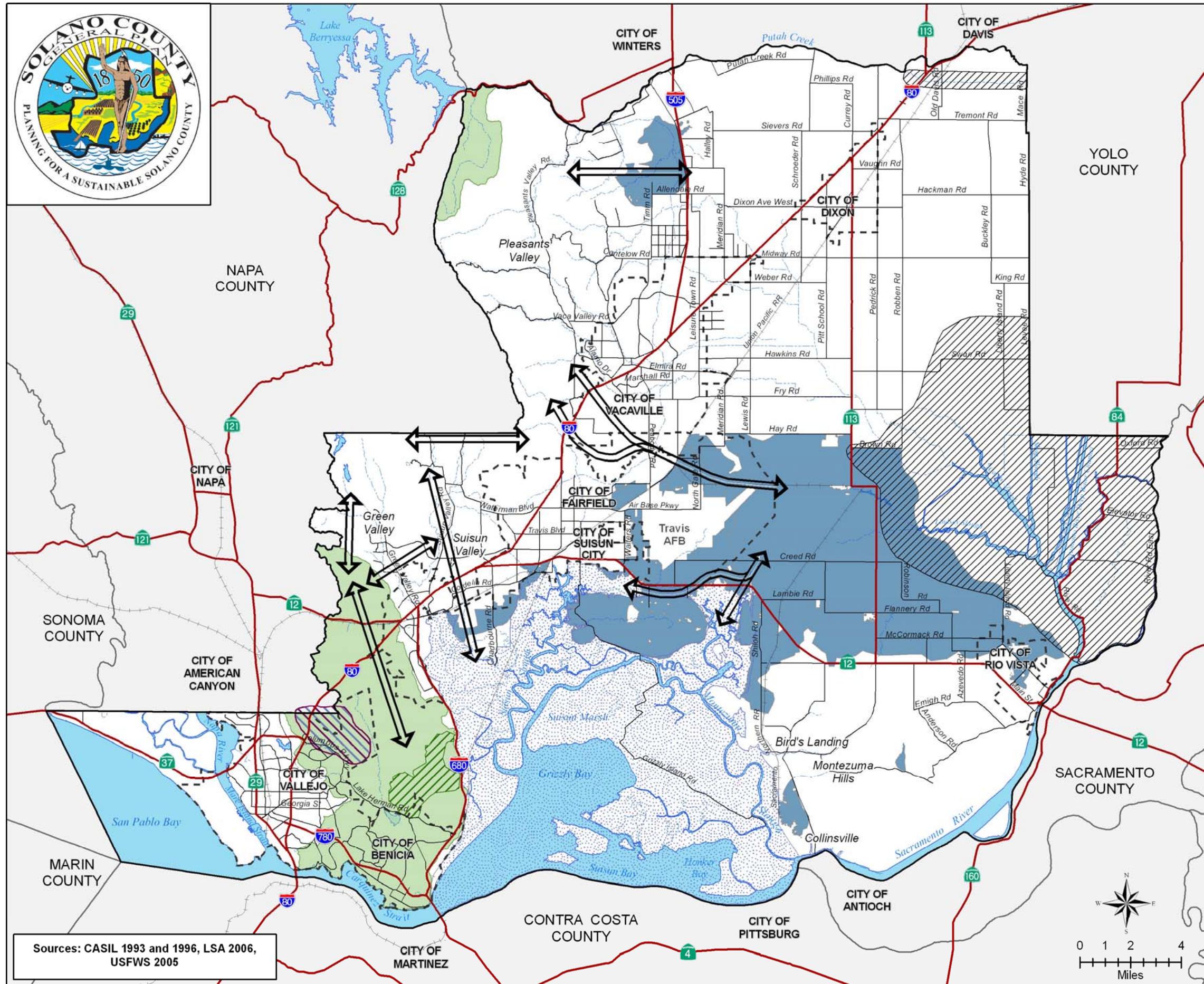
Funding Source: General Fund; Volunteers; Nonprofits

Time Frame: By 2011

Solano County General Plan

Figure RS-1

Priority Habitat Areas



Solano County General Plan

Figure RS-1

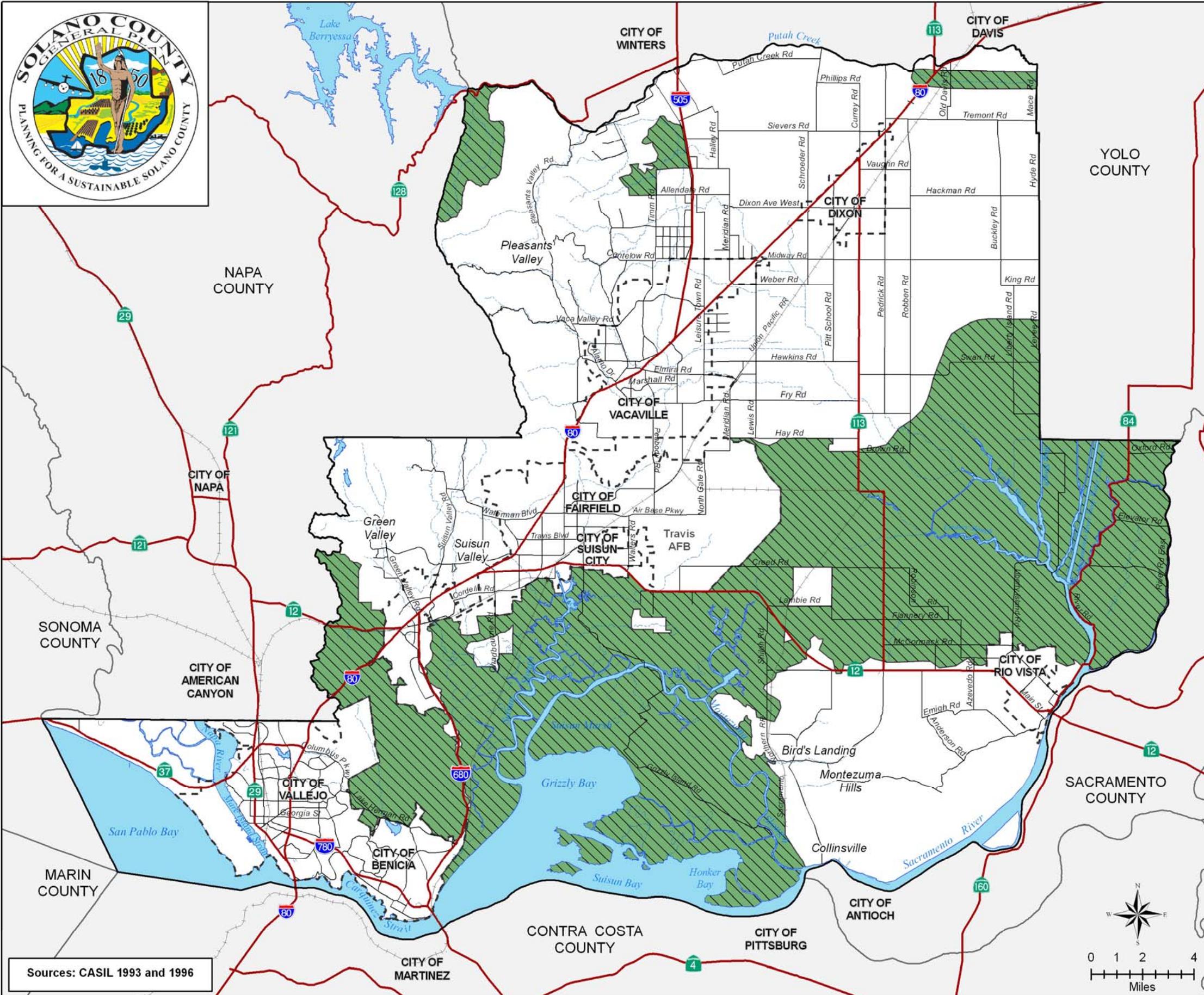
Priority Habitat Areas

Legend

- ↔ Corridors/Linkages
- Suisun Marsh Protection Plan (April 1995)
- Primary Management Area
- Giant Garter Snake Priority Conservation Area
- Callippe Silverspot Butterfly Priority Conservation Area
- High Value Vernal Pool Conservation Areas
- California Red-legged Frog Final Critical Habitat (USFWS 2005)
- California Red-legged Frog Core Recovery Area
- Basemap Layers**
- Roadways
- Highways
- Railroads
- Streams and Creeks
- Major Water Features
- Municipal Service Areas
- Adjacent Counties

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Solano County General Plan

Figure RS-2

Resource Conservation Overlay

Legend

- [diagonal stripes] Resource Conservation Overlay
 - [solid blue line] Basemap Layers
 - Roadways
 - Highway
 - Railroad
 - Stream and Creek
 - [solid light blue box] Major Water Features
 - [dashed black line] Municipal Service Areas
 - [white box with black border] Adjacent Counties

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Development Review

RS.I-6:	Require all discretionary development proposals (with the exception of agricultural uses) within the Resource Conservation Overlay to submit an assessment that evaluates site conditions and potential project-related impacts on the targeted resource(s) of concern. The site assessment shall be prepared by a qualified professional approved by Solano County. The assessment shall be paid for by the applicant. The assessment will be used to (1) determine if the project will create negative impacts on the viability of the targeted resource and (2) determine the appropriate measures to avoid or mitigate such impacts.
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Related Policies: RS.P-1, RS.P-3

Agency/Department: Department of Resource Management

Funding Source: Project Applicant

Time Frame: Ongoing

RS.I-7:	Require certain findings by the Board of Supervisors to allow General Plan Amendments within the Resource Conservation Overlay that redesignate land from the Agriculture, Marsh, Watershed, or Park and Recreation designations to a use other than those listed above. To approve such redesignation, the Board of Supervisors must make one or more of the following findings:
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- the site conditions (vegetation types, soils, topography) are not suitable as habitat for the target resource(s) identified in the Resource Conservation Overlay;
- the characteristics and size of the subject property make it unsuitable for conservation of the target resource; or
- no other lands with the requested land use classification are available for the proposed project.

Related Policies: RS.P-1, RS.P-3

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

RS.I-8: Require the planting of shade and roadside trees in development projects for aesthetic, air quality, and other associated benefits. Encourage the use of native tree species, especially native oaks. Create development standards to ensure appropriate placement, care, and maintenance. The County shall evaluate the feasibility of planting of roadside trees as part of major County road improvement projects.

Related Policy: RS.P-6

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach and Education

RS.I-9: Together with DFG, USFWS, Solano Water Agency and other agencies, determine and map critical wildlife movement and habitat corridors and riparian buffer areas. Ensure that the areas are sufficient in size to maintain landscape ecological functions and viable populations. Add the mapped critical corridors to the Resource Conservation Overlay.

Related Policy: RS.P-5

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Coordination with Other Agencies and Organizations

RS.I-10: Develop an agricultural riparian incentive program that encourages farmers and ranchers and other landowners to maintain or create riparian habitat along streams, creeks, canals, and wetlands. Collaborate with other agencies and organizations (including, but not limited to Solano Land Trust, RCD, Department of Fish and Game, Central Valley Regional Water Quality Control Board (RWQCB), Farm Bureau, Bay Delta Authority, Ducks Unlimited, Sierra Club, Audubon Society) to develop funding mechanisms, including grant funds, to support long-term riparian conservation and restoration efforts. The program should fund wildlife-compatible

fencing of sensitive riparian areas. The program should also develop strategies to pay farmers and ranchers for habitat protection. Strategies could include payment for ecosystems services provided, purchase of conservation easements, or fee simple purchase of riparian areas.

Related Policy: RS.P-1

Agency/Department: Department of Resource Management

Funding Source: General Fund, Grant funds

Time Frame: Ongoing

-
- | | |
|----------|--|
| RS.I-11: | <p>Together with landowners, land trusts, and agencies, explore habitat preservation alternatives, such as:</p> <ul style="list-style-type: none"> ▪ voluntary acquisition of development rights or conservation easements; ▪ developing mitigation banks, especially within Resource Conservation Overlay areas; ▪ providing outreach to landowners within the Resource Conservation Overlay regarding benefits of conservation easements; ▪ promoting agricultural practices compatible with habitat protection; ▪ allowing income-generating uses on agricultural lands that can support farmers who protect habitat lands; and ▪ promoting eco-tourism to generate revenues to support habitat protection and keep agriculture viable. |
|----------|--|

Related Policies: RS.P-1, RS.P-2, RS.P-3, RS.P-4

Agency/Department: Department of Resource Management; Solano County Water Agency; Resource Conservation Districts

Funding Source: General Fund, Grant funds

Time Frame: Ongoing

MARSH AND DELTA AREAS

Planning Context

Solano County contains extensive marshlands critical to the health and vitality of the estuary ecosystem in the San Francisco Bay and Sacramento-San Joaquin Delta (Bay-Delta). The county is home to the largest contiguous brackish water marsh remaining on the west coast of North America and encompasses more than 10 percent of California's remaining natural wetlands. These areas provide habitat for a diverse number of species and also provide valuable ecosystem services. The county's marsh and Delta areas serve as the resting and feeding ground for thousands of waterfowl migrating on the Pacific Flyway and support 80 percent of the state's commercial salmon fishery by providing important tidal rearing areas for juvenile fish.

Related Plans, Programs, and Agencies

This section describes the plans, programs, and legislative acts that direct Solano County in the protection of its marshes and Delta area. The General Plan must be consistent with these, as well as with the implementation programs referenced below.

Suisun Marsh Protection Act

In 1974, the California Legislature passed the Suisun Marsh Protection Act, designed to preserve Suisun Marsh from residential, commercial, and industrial development. The act directs BCDC and DFG to prepare a protection plan for Suisun Marsh "to preserve the integrity and assure continued wildlife use" of the marsh. The objectives of the protection plan are to preserve and enhance the quality and diversity of the Suisun Marsh's aquatic and wildlife habitats and to ensure retention of upland areas adjacent to the marsh in uses compatible with its protection.

Suisun Marsh Local Protection Program

Under the Suisun Marsh Protection Act, Solano County and other agencies having jurisdiction within the Suisun Marsh were required to bring their policies, regulations, programs and operating procedures into conformity with the provision of the Suisun Marsh Protection Act and the Suisun Marsh Protection Plan through the preparation of a Local Protection Program. Solano County's component of the Local Protection Program includes, General Plan policies and other polices, programs and regulations to preserve and enhance the wildlife habitat of the Suisun Marsh and to assure retention of upland areas adjacent to the marsh in uses compatible with its protection.

Delta Protection Act

The Delta Protection Act of 1992 established the Delta Protection Commission (DPC). DPC is a state agency with jurisdiction over the Primary Zone of the Delta, which is located in five counties: Solano, Yolo, Sacramento, San Joaquin, and Contra Costa. DPC is charged with the task of preparing a regional plan to address land uses and resource management for the Delta area. Key land uses identified in the legislation include agriculture, wildlife habitat, and recreation. DPC adopted its *Land Use and Resource Management Plan for the Primary Zone of the Delta* on February 23, 1995. The plan was forwarded to the five counties for incorporation into their general plans and zoning ordinances. The counties will then carry out the plan through their day-to-day activities.

White Slough Specific Plan

In 1991 the McAteer-Petris Act was amended to authorize the development of a specific area plan for White Slough by the City of Vallejo and Solano County. The *White Slough Specific Plan* aims to provide orderly, long-range conservation, use, and management of the natural, scenic, and recreational resources of White Slough. The plan includes the permanent protection and enhancement of 336 acres of tidal wetlands within White Slough and 132 acres of tidally influenced areas in South White Slough. The plan limits fill to 13 acres or less related to improvements of SR 37. The plan also aims to provide flood protection to upland areas and provide water quality protection and enhancement measures.

Napa Sonoma Marsh Restoration Project

In a collaborative effort, the U.S. Army Corps of Engineers, the California Coastal Conservancy, and DFG are managing a restoration project for 9,460 acres of wetlands and associated habitats within the former Cargill salt pond complex located to the north and northwest of Mare Island in Solano, Napa, and Sonoma Counties. The project will protect and enhance extensive habitat for endangered species, migratory waterfowl and shorebirds, and fish and other aquatic species; improve water quality and productivity in the Napa River and San Francisco Bay; and provide open space and recreational opportunities.

Delta Vision and Strategic Plan

Delta Vision is a state-sponsored process that intends to identify a strategy for managing the Sacramento-San Joaquin Delta as a sustainable ecosystem that would continue to support the environmental and economic functions critical to the people of California.

The Delta Strategic Plan will contain implementation recommendations of the Delta Vision Committee including changes in the use of land and water resources, services to be provided within the Delta, governance, funding mechanisms and ecosystem management practices. The final Delta Strategic Plan will be submitted to the Governor and Legislature by December 31, 2008. The 2008 Solano County General Plan may need to

be amended to comply with the Delta Strategic Plan and related legislation.

General Marsh-Delta Policies

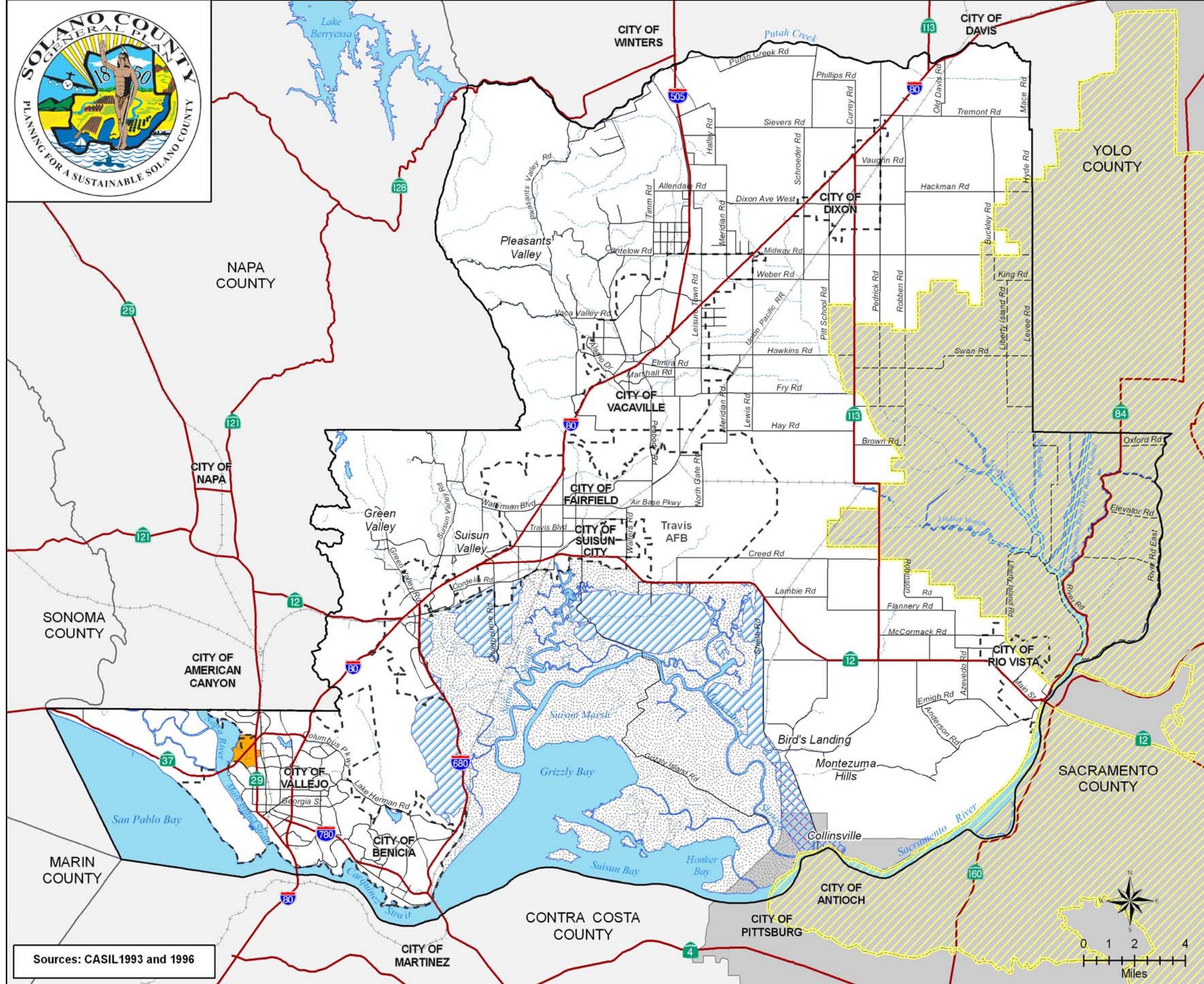
-
- RS.P-7: Preserve and enhance the diversity of habitats in marshes, delta to maintain these unique wildlife resources.
- RS.P-8: Protect marsh waterways, managed wetlands, tidal marshes, seasonal marshes, and lowland and grasslands because they are critical habitats for marsh-related wildlife and are essential to the integrity of the marshes.
- RS.P-9: Encourage restoration of historic marshes to wetland status, either as tidal marshes or managed wetlands. When managed wetlands are no longer used for waterfowl hunting, restore them as tidal marshes.

Suisun Marsh Policies

The Marsh designation has been applied to the Suisun Marsh on the Land Use Diagram. This designation is designed to preserve and enhance the quality and diversity of marsh habitats. Uses in marsh designated areas should be restricted to aquatic and wildlife habitat; marsh-oriented recreational uses; agricultural activities compatible with the marsh environment and which protect the habitat value of marsh areas; and educational and scientific research opportunities and resources.

The Primary Management Area as established in the Suisun Preservation Act of 1977 is shown in Figure RS-3. This area consists of tidal marshes, seasonal marshes, managed wetlands, and lowland grasslands. It is the intent for this area to remain in its existing marsh and related uses as provided for in the Suisun Marsh Local Protection Program. The Secondary Management area established in the 1977 Act and shown in Figure RS-3 is designated for agricultural use. This area consists of upland grasslands and agricultural lands and serves as a significant buffer to the wetland areas. The Secondary Management Area is designed to assure retention of upland areas adjacent to the marsh in uses compatible with its protection as provided for in the Suisun Marsh Local Protection Program. The County has applied Marsh Preservation and Limited Agricultural zoning districts to the Primary and Secondary Management Areas, consistent with the General Plan.

In addition to the Suisun Marsh, a number of important habitat areas also exist along the county's significant water courses. The plan seeks to preserve the water quality and riparian habitat of these watercourses through the control of erosion, sedimentation and runoff resulting from adjacent use and development.



Solano County General Plan
Figure RS-3
Delta and Marsh Protection Areas

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Areas west of I-680 and outside the boundaries of the City of Fairfield are excluded from the land use restrictions which the Act places upon the buffer, except for watercourse protection and erosion and sediment control provisions.

Under the Suisun Marsh Local Protection Program, all public and private management and development activities within the Primary and Secondary Management areas of the Suisun Marsh shall be consistent with the policies and provisions of the Suisun Marsh Protection Plan as adopted by the San Francisco Bay Conservation and Development Commission. The Marsh designation in the Water Related Industry Reserve area, a part of the secondary management area of the Suisun Marsh Protection Plan, will be managed in the same fashion as if it were a part of the primary management area of the Suisun Marsh Protection Plan.

The following policies are a part of the County's component of the Suisun Marsh Local Protection Program. More specific General Plan policies in the Local Protect Program that apply to the Suisun Marsh area are provided in Appendix C.

The following policies apply specifically to the Suisun Marsh area. These policies are more specific than the balance of the General Plan to address the requirements of the *Suisun Marsh Protection Plan* and the Suisun Marsh Protection Act of 1977.

-
- RS.P-10: The County shall preserve and enhance wherever possible the diversity of wildlife and aquatic habitats found in the Suisun Marsh and surrounding upland areas to maintain these unique wildlife resources.
 - RS.P-11: The County shall protect its marsh waterways, managed and natural wetlands, tidal marshes, seasonal marshes and lowland grasslands which are critical habitats for marsh-related wildlife.
 - RS.P-12: Existing uses should continue in the upland grasslands and cultivated areas surrounding the critical habitats of the Suisun Marsh in order to protect the Marsh and preserve valuable marsh-related wildlife habitats. Where feasible, the value of the upland grasslands and cultivated lands as habitat for marsh-related wildlife should be enhanced.
 - RS.P-13: Agriculture within the Primary Management Area of the Suisun Marsh should be limited to activities compatible with, or intended for, the maintenance or improvement of wildlife habitat. These include extensive agricultural uses such as grain production and grazing. Intensive agricultural activities involving removal or persistent plowing of natural vegetation and maintenance of fallow land during part of the year should not be permitted.

- "planning for a Sustainable Solano County"
- RS.P-14: Agricultural uses consistent with protection of the Suisun Marsh, such as grazing and grain production, should be maintained in the Secondary Management Area. In the event such uses become infeasible, other uses compatible with protection of the Marsh should be permitted.
 - RS.P-15: In marsh areas, the County shall encourage the formation and retention of parcels of sufficient size to preserve valuable tidal marshes, seasonal marshes, managed wetlands and contiguous grassland areas for the protection of aquatic and wildlife habitat.
 - RS.P-16: The County shall ensure that development in the County occurs in a manner which minimizes impacts of earth disturbance, erosion and water pollution.
 - RS.P-17: The County shall preserve the riparian vegetation along significant County waterways in order to maintain water quality and wildlife habitat values.
 - RS.P-18: The County shall ensure that public access at appropriate locations is provided and protected along the county's significant waterways within the Suisun Marsh.
 - RS.P-19: Within the watershed of the Suisun Marsh, the County shall encourage sound agricultural practices which conserve water quality and the riparian vegetation.

Sacramento-San Joaquin Delta Policies

The following policies apply specifically to the Delta area. These resource policies are more specific to address the requirements of the *Delta Protection Plan*.

-
- RS.P-20: The goals, policies, and provisions of the Land Use and Resource Management Plan for the Primary Zone of the Delta are incorporated by reference. Ensure that all public and private management and development activities within the Primary Zone of the Delta are consistent with the goals, policies and provisions of the Land Use and Resource Management Plan for the Primary Zone of the Delta as adopted and as may be amended by the Delta Protection Commission.
 - RS.P-21: Preserve and protect the natural resources of the Delta including soils and riparian habitat. Lands managed primarily for wildlife habitat should be managed to provide inter-related habitats.
 - RS.P-22: Promote seasonal flooding and agricultural practices on agricultural lands in cooperation with landowners that

incorporated "best management practices" to maximize wildlife use of lands in the Delta.

- RS.P-23: Ensure that extension of new utilities and infrastructure facilities, including those that support uses and development outside the Delta is consistent with the Land Use and Resource Management Plan for the Primary Zone of the Delta. Where construction of new utility and infrastructure facilities is appropriate, the effects of such new construction on the integrity of levees, wildlife, and agriculture activities shall be minimized to the extent feasible.
- RS.P-24: Protect the unique character and qualities of the Primary Zone by preserving the cultural heritage and the strong agricultural base.
- RS.P-25: Support long-term viability of commercial agriculture and discourage inappropriate development of agricultural lands within the Delta. Prohibit new residential, commercial, and industrial uses inconsistent with the Land Use and Resource Management Plan for the Primary Zone of the Delta.
- RS.P-26: Promote continued recreational use of the land and waters of the Delta, including fishing and boating; ensure needed recreational facilities are constructed, maintained, and supervised; protect landowners from unauthorized recreational uses on private lands; and maximize dwindling public funds for recreation by promoting public private partnerships and multiple uses of Delta lands consistent with the Land Use and Resource Management Plan for the Primary Zone of the Delta.
- RS.P-27: Support the improvement and long-term maintenance of Delta levees to preserve land areas and channel configurations in the Delta by coordinating permit reviews, and guidelines for levee maintenance; supporting development of a long-term funding program for levee maintenance; protecting levees in emergency situations; and giving levee rehabilitation and maintenance priority over other uses of levee areas.
- RS.P-28: Protect long-term water quality in the Delta in coordination with water agencies at local, state, and federal levels for designated beneficial uses, including agriculture, municipal, water-dependent industrial, water-contact recreation, boating and fish and wildlife habitat.
- RS.P-29: Support marine patrol, boater education, and safety programs to the extent financially feasible and in coordination with the U.S. Coast Guard and state and local agencies with jurisdiction with the Delta.

In addition to the specific Delta policies, the Agriculture chapter has a number of policies similar to the agricultural policies in the Delta Plan. The Agriculture chapter identifies 10 agricultural regions based on the Agriculture Futures Study completed by UC Davis Agricultural Issues Center. They include Ryer Island area and the Elmira and Maine Prairie area a portion of which is in the Primary Delta. Pursuant to Agriculture chapter implementation programs, strategic plans will be prepared for each agricultural region through a community based process that will address the specific issues for each region.

White Slough Specific Plan Area Policies

The following policies apply specifically to the *White Slough Specific Plan* area. These resource policies are proposed to address the requirements of the *White Slough Specific Plan*.

-
- RS.P-30: Ensure that marsh restoration activities and land use development within the White Slough area is consistent with the *White Slough Specific Plan*.
- RS.P-31: Facilitate the acquisition of remaining privately owned parcels/development rights within the *White Slough Specific Plan* area.

Napa Sonoma Marsh Restoration Project Policy

-
- RS.P-32: Require marsh restoration activities and land use development within the Napa Sonoma Marsh Restoration Project area to be consistent with the requirements of the Napa Sonoma Marsh Restoration Project.

Implementation Programs

Regulations

-
- RS.I-12 Review and update the Solano County component of the *Suisun Marsh Local Protection Program* in coordination with the San Francisco Bay Conservation and Development Commission. The guidelines and standards identified in current policies should be incorporated into the County Zoning Ordinance and development guidelines. The update will address General Plan policies and other policies, programs and regulations within the local protection program.

Related Policies: RS.P-10 to RS.P-19, RS.P-57, RS.P-58

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame:	2011
RS.I-13:	Incorporate wind turbine guidelines, addressing development of wind turbines in the Suisun Marsh, into the County code and development guidelines. Wind turbines were not addressed in the <i>Suisun Marsh Protection Plan</i> .
Related Policy:	RS.P-14
Agency/Department:	Department of Resource Management
Funding Source:	General Fund
Time Frame:	Ongoing

Ongoing Planning Efforts, Public Outreach and Education

RS.I-14:	Promote seasonal flooding and agricultural practices on agricultural lands in cooperation with landowners to maximize wildlife use of lands in the Delta. Explore incentive programs to encourage land owner participation.
Related Policies:	RS.P-8, RS.P-22
Agency/Department:	Department of Resource Management
Funding Source:	General Fund
Time Frame:	Ongoing

Coordination with Other Agencies and Organizations

RS.I-15:	Coordinate with existing plans and programs regarding the San Francisco Bay, Sacramento River, Sacramento-San Joaquin Delta, and adjacent marsh areas including: <ul style="list-style-type: none"> ▪ the <i>Suisun Marsh Protection Plan</i>, ▪ the Napa Sonoma Marsh Restoration Project, ▪ the CALFED Bay-Delta Protection Program, and ▪ White Slough Specific Plan – Complete the exchange of land between the City of Vallejo and the County through the annexation and deannexation of lands as set forth in the <i>White Slough Specific Plan</i> and change land use designations as called for in the <i>White Slough Specific Plan</i>.
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Related Policies:	RS.P-7 to RS.P-32
Agency/Department:	Department of Resource Management
Funding Source:	General Fund
Time Frame:	Ongoing

MINERALS

Planning Context

Solano County is rich in a number of nonfuel mineral resources. Mineral resources mined or produced within Solano County include mercury, sand and gravel, clay, stone products, calcium, and sulfur. Policies regarding the extraction of natural gas may be found later in this chapter, under the Energy Resources and Conservation section.

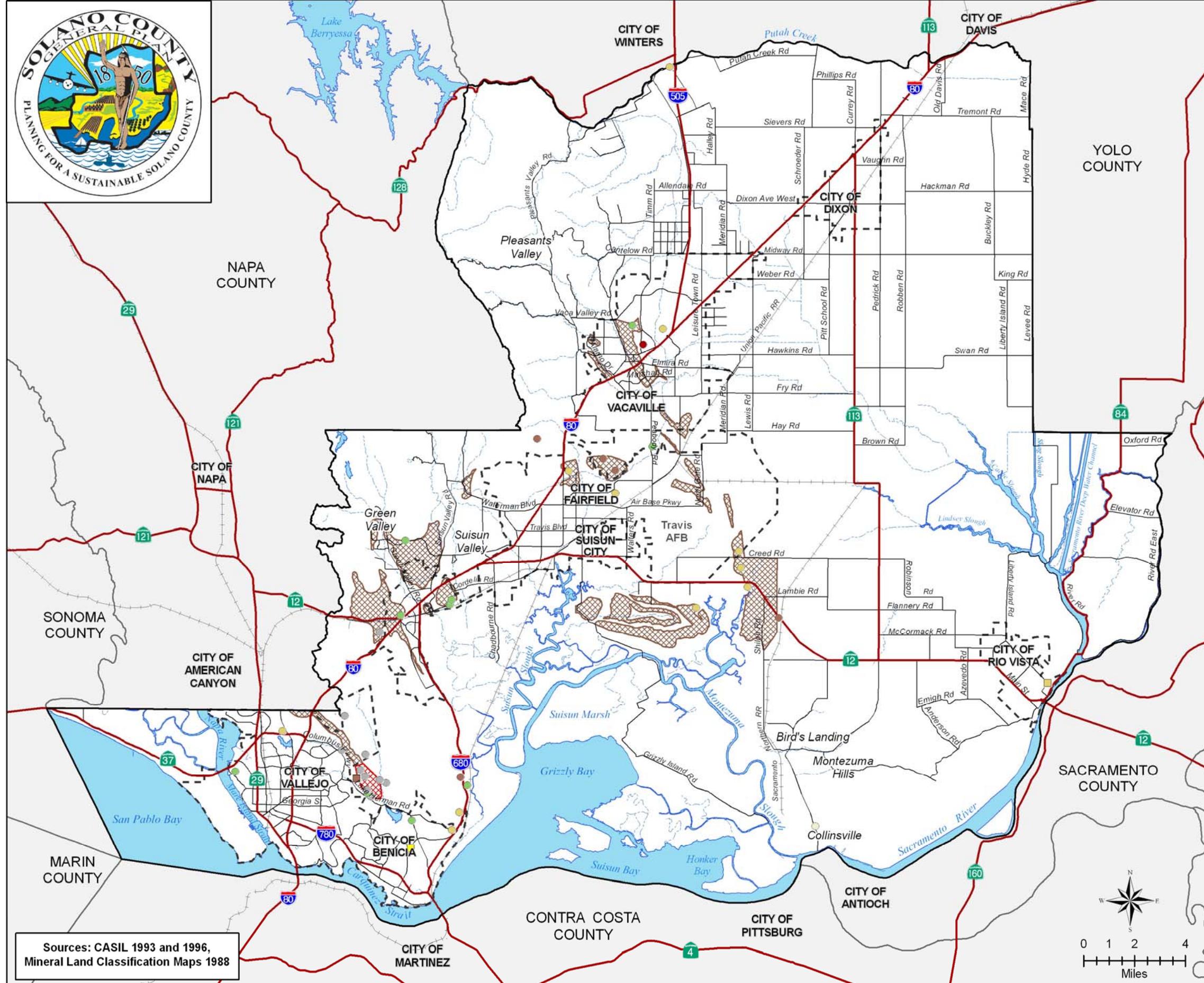
Figure RS-4 shows the locations of mineral resource zones in Solano County. Known mineral resource zones (MRZs) are located to the northeast of Vallejo, to the south and southeast of Green Valley, in areas south and east of Travis Air Force Base, and in pockets located within both Vacaville and Fairfield. Stone, gravel, sand, and clay mines are spread out around the county. Most of the mercury mines are clustered in or near the Sulfur Springs Mountain Range east of the City of Vallejo. Mercury mines include the St. Johns Mine, Hastings Mine, Borges Prospect, Brownlie Property, Vallejo, and one unnamed location. MRZs are classified by the State Geologist on the basis of geologic factors and may fall into one of four general classifications (MRZ-1 through MRZ-4). MRZ-3 zones occur throughout the county while only one MRZ-2 zone is mapped near Vallejo and Benicia. MRZ-2 zones have the highest probability of having significant mineral deposits, while MRZ-3 zones are likely to have mineral deposits which may or may not be significant.

Policies related to mineral resources facilitate the extraction of known mineral deposits, prevent the encroachment of incompatible uses adjacent to such deposits, and require mines to conduct their operations in a manner compatible with the health, safety, and welfare of county residents and surrounding land uses.

Related Plans, Programs, and Agencies

Surface Mining and Reclamation Act of 1975

The California Surface Mining and Reclamation Act of 1975 (SMARA) requires that all jurisdictions incorporate mapped mineral resources designations approved by the State Mining and Geology Board within their general plans. These resources are identified on Figure RS-4. SMARA was enacted to limit new development in areas with important mineral deposits.



Solano County General Plan
Figure RS-4
Mineral Resources

"Planning for a Sustainable Solano County"

Policies

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- | | |
|----------|---|
| RS.P-33: | The County shall preserve, for future use, areas with important mineral resources by preventing residential, commercial, and industrial development that would be incompatible with mining practices to the extent feasible. |
| RS.P-34: | Ensure that mineral extraction operations are performed in a manner compatible with land uses on the site and surrounding area and do not adversely affect the environment. At the end of such operations, ensure that the site is restored to conform with Surface Mining and Reclamation Act requirements and to a use compatible with surrounding land uses. |

Implementation Programs

Regulations

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- | | |
|--------------------|---|
| RS.I-16: | Designate land uses in mineral areas appropriately to ensure compatibility between mineral extraction and surrounding uses. |
| Related Policies: | RS.P-33 |
| Agency/Department: | Department of Resource Management |
| Funding Source: | General Fund |
| Time Frame: | Ongoing |

Development Review

-
- | | |
|--------------------|---|
| RS.I-17: | Evaluate impacts related to extracting mineral resources from new areas as part of the required permitting process to ensure that remediation occurs after minerals are extracted. Comply with regulations found in the Surface Mining and Reclamation Act. |
| Related Policy: | RS.P-34 |
| Agency/Department: | Department of Resource Management |
| Funding Source: | Project Applicant |
| Time Frame: | Ongoing |

RS.I-18: Create a mechanism by which owners of lands designated as containing important mineral resources can demonstrate to the County that mineral resources are not present, or are not economically feasible, and amend the designation.

Related Policy: RS.P-33

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach and Education

RS.I-19: Remain aware of studies that may reveal the presence of additional, economically viable sources of mineral resources in the County.

Related Policy: RS.P-33

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

SCENIC RESOURCES

Planning Context

The county's agricultural landscapes, the delta and marshlands, and the oak and grass covered hills offer an abundance of scenic vistas. This scenery is an important factor in sustaining a high quality of life for the county's residents. Human activity can have both positive and negative effects on the landscape. While extensive growth occurred during recent decades and as a result certain scenic resources have been lost or obscured, the county retains a wealth of intact viewsheds. Preserving the county's valued landscapes in the future will require continued application of appropriate land use policies and development standards that respect this context.

The county's scenic resources policies and programs work in two ways. First, they protect valued landscape features found throughout the county and second, they ensure that new urban or rural development within the scenic roadway corridors is developed in a manner that respects and maintains the integrity of the viewsheds.

Related Plans, Programs, and Agencies

County area and specific plans contain language aimed at preserving, conserving, and enhancing visual resource values within the target planning area. The plans identify viewsheds or general scenic resources to be protected or improved. Plans that discuss visual resource protection explicitly include the *Tri-City and County Cooperative Plan for Agriculture and Open Space Preservation*.

Tri-City and County Cooperative Plan for Agriculture/Open Space Preservation

One of the primary objectives of the Tri-City and County Cooperative Plan is to conserve and enhance visual resources within the plan area. The plan contains policies and measures that restrict development and the extension of infrastructure into the area of valued open space between Vallejo, Benicia and Fairfield. The plan also contains area specific policies specific to siting wind turbines. These policies aim to limit the visual impact of wind energy development. The full text of the plan is contained in Chapter 11.

Policies

RS.P-35:	Protect the unique scenic features of Solano County, particularly hills, ridgelines, wetlands, and water bodies.
RS.P-36:	Support and encourage practices that reduce light pollution and preserve views of the night sky.
RS.P-37:	Protect the visual character of designated scenic roadways.

Implementation Programs

Regulations

RS.I-20:	Amend the Zoning Ordinance to:
	<ul style="list-style-type: none"> ▪ Include the area, policies and programs of the <i>Tri-City and County Cooperative Plan for Agriculture and Open Space Preservation</i>. ▪ Regulate construction on steep slopes. This would include slope/density provisions that reduce allowable density based on the steepness of slopes.

- Direct the use of lighting fixtures that reduce glare and light pollution. The ordinance should provide standards for the type and location of lighting fixtures in development projects.
- Regulate construction on ridge lines.

Related Policy: RS.P-35

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

RS.I-21: Preserve the visual character of scenic roadways as shown in Figure RS-5 through design review, designating alternate routes for faster traffic, regulating off-site advertising, limiting grading in the view corridor through the grading ordinance, limiting travel speeds, and providing pullover areas with trash and recycling receptacles.

Related Policy: RS.P-37

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Development Review

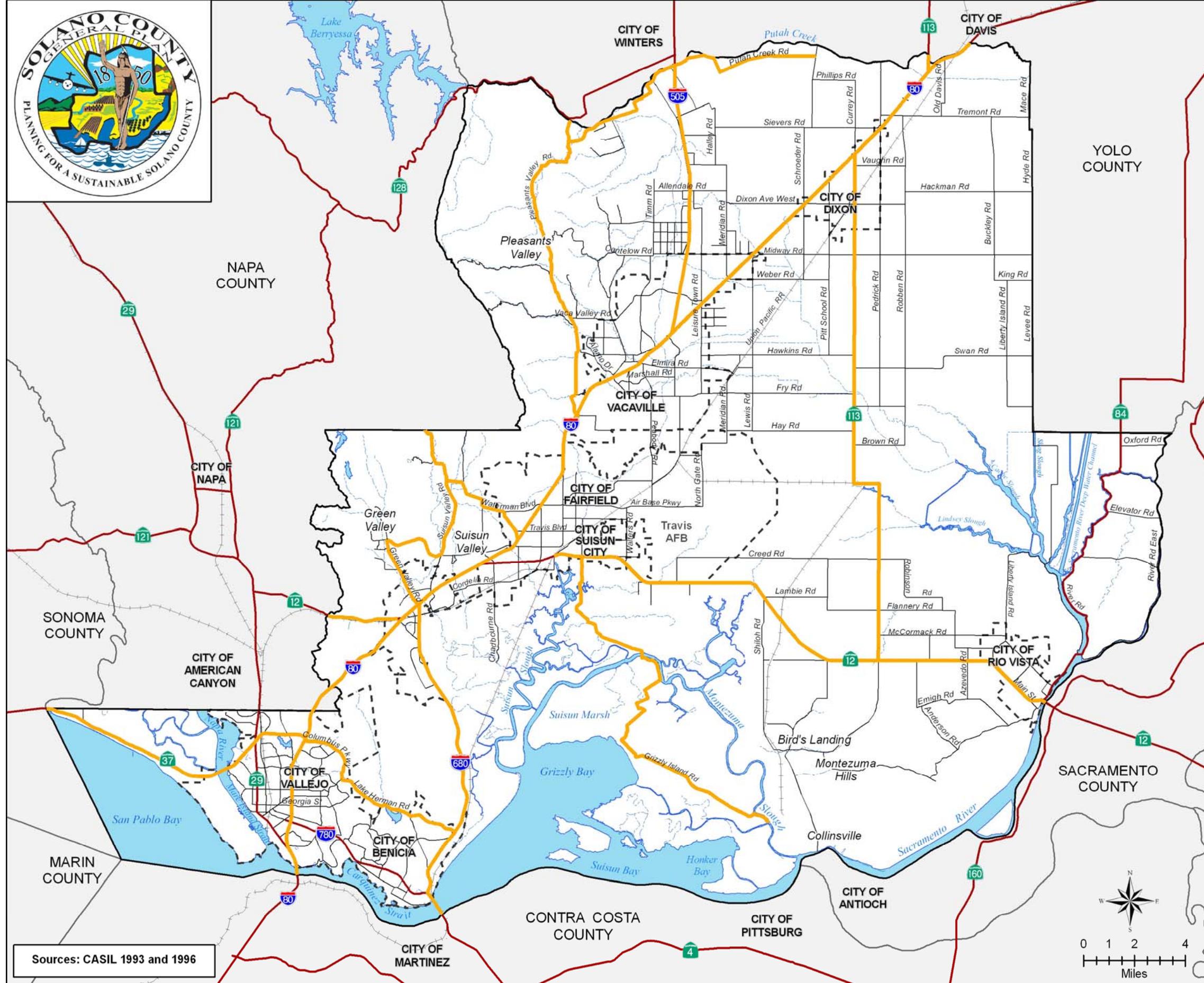
RS.I-22: In new developments, require the use of fixtures that direct light toward target areas and shield it from spillage.

Related Policy: RS.P-36

Agency/Department: Department of Resource Management

Funding Source: Project Applicant

Time Frame: Ongoing



Solano County General Plan
Figure RS-5
Scenic Roadways

"Planning for a Sustainable Solano County"

Ongoing Planning Efforts, Public Outreach and Education

RS.I-23:	Provide education on light pollution and how individuals and development proposals may decrease impacts.
Related Policy:	RS.P-36
Agency/Department:	Department of Resource Management
Funding Source:	General Fund
Time Frame:	Ongoing

Coordination with Other Agencies and Organizations

RS.I-24:	Promote continued interjurisdictional cooperation and coordination of resource and land use planning of the Cooperative Planning Area through the continued operation of the Tri-City and County Cooperative Planning Group.
Related Policy:	RS.P-35
Agency/Department:	Department of Resource Management
Funding Source:	General Fund
Time Frame:	Ongoing

CULTURAL RESOURCES

Planning Context

Cultural resources include the archaeological and historic sites that provide the county's modern day residents a connection to the past and a sense of place. A variety of policies and implementation programs are needed to protect these resources from destruction by development, infrastructure extensions, modernization, and the more subtle but persistent effects of time and erosion.

Archeological evidence demonstrates that humans have lived in the region from at least the Lower Archaic period that occurred between 10,000 and 6,000 years Before Present. Prehistoric sites have been discovered throughout the county that contain shell mounds, milling sites, pottery, and worked stone artifacts. Historic records are available that describe the indigenous peoples at the time of European contact. The majority of the county was inhabited by a loosely associated group who referred to themselves as the Patwin. A small area of the eastern portion of the county may have been inhabited by the Plains Miwok.

The California Native American Heritage Commission has identified the presence of an area of traditional, religious, and cultural importance to Native Americans within the county. While the specific location of the sacred area cannot be divulged in order to protect the site, the County will work with interested Native American groups in order to explore management strategies regarding the site.

Historic sites relevant to different time periods are found throughout the county. The Rancho period occurred in the mid-1800s when Mexican settlers constructed missions and forts in the region. Much of Solano County was divided into land grants, which were primarily used as cattle ranches for the hide- and tallow-based economy. American settlers arrived concurrently and began farming and ranching in the county's rich soils. As time progressed, numerous communities were established around the county. Many of the cities and the communities' villages exhibit historical features from the late 1800s and early 1900s including neighborhoods with small-block street-grid patterns and architectural styles that range from Italianate to vernacular cottages.

Two primary issues affect the maintenance and preservation of the county's cultural resources. The first issue is the need to continue to improve consultation with Native American groups regarding the protection of traditional cultural places and sacred sites in the context of land use decisions. In order to effectively protect such areas, the County intends to consult with Native American groups and carry out the following tasks:

- Create a dialogue between County and tribal governments in order to identify cultural places and consider such sites in land use planning decisions.
- Develop a program to systematically avoid conflicts with Native American cultural places by ensuring that local and tribal governments are provided with information early in planning processes.
- Evaluate the potential for permanently protecting certain Native American cultural places by designating them as open space.
- Develop proper management and treatment plans for cultural places.
- Develop a program to enable tribes to manage their cultural places.

The second issue focuses on the opportunity to leverage the county's historic capital for use in economic pursuits, particularly those relating to tourism. Potential exists to create a "string-of-pearls" consisting of portions of cities and unincorporated towns and areas of the county that seek to build around their history. This strategy could be a great compliment to ongoing agri-tourism efforts elsewhere in the county.

Related Plans, Programs, and Agencies

California Environmental Quality Act

The California Environmental Quality Act (CEQA) states that it is the policy of the State of California to "take all action necessary to provide the people of this state with...historic environmental qualities...and preserve for future generations examples of the major periods of California history." If an impact on a historical or archaeological resource is significant, CEQA requires feasible measures to minimize the impact. Mitigation of significant impacts must lessen or eliminate the physical impact that the project will have on the resource. CEQA requires that all feasible mitigation be undertaken even if it does not mitigate impacts to a less-than-significant level.

California Senate Bill 18

California SB 18 (2004) requires that local governments (city and county) consult with Native American groups to aid in the protection of traditional Native American cultural places through local land use planning. The intent of SB 18 is to provide California Native American groups with an opportunity to participate in local land use decisions at an early stage to protect or mitigate impacts on cultural places. SB 18 requires local governments to consult with Native American groups before adopting and amending both general plans and specific plans.

Policies

RS.P-38:	Identify and preserve important prehistoric and historic structures, features, and communities.
RS.P-39:	Tie historic preservation efforts to the County's economic development pursuits, particularly those relating to tourism.
RS.P-40:	Consult with Native American governments to identify and consider Native American cultural places in land use planning.

Implementation Programs

Development Review

RS.I-25:	Require cultural resources inventories of all new development projects in areas identified with medium or high potential for archeological or cultural resources. Where a preliminary site survey finds medium to high potential for substantial archaeological remains, the County shall require a mitigation plan to protect the resource before issuance of permits. Mitigation may include:
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- "Planning for a Sustainable Solano County"
- Having a qualified archaeologist present during initial grading or trenching (monitoring);
 - Redesign of the project to avoid archaeological resources (this is considered the strongest tool for preserving archaeological resources);
 - Capping the site with a layer of fill; and/or
 - Excavation and removal of the archaeological resources and curation in an appropriate facility under the direction of a qualified archaeologist.
 - Alert applicants for permits within early settlement areas to the potential sensitivity. If significant archaeological resources are discovered during construction or grading activities, such activities shall cease in the immediate area of the find until a qualified archaeologist can determine the significance of the resource and recommend alternative mitigation.

Related Policies: RS.P-38, RS.P-40

Agency/Department: Department of Resource Management

Funding Source: Project Applicant

Time Frame: Ongoing

Coordination with Other Agencies and Organizations

RS.I-26: Work with federal and state agencies to identify, evaluate, and protect the county's important historic and prehistoric resources. Programs administered by such agencies may include:

- California Historic Landmarks
- California Points of Historical Interest
- California Register of Historic Resources
- National Register of Historic Places
- State Historic Building Code

Related Policies: RS.P-38, RS.P-40

Agency/Department: Department of Resource Management

Funding Source: Project Applicant

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach and Education

RS.I-27: Refer to the state Senate Bill 18 guidelines and requirements regarding cultural resources. Programs the County will engage in may include:

- ensuring local and Native American governments are provided with information early in the planning process,
- working with Native American governments to preserve and protect Native American cultural sites by designating them as open space where possible,
- providing management and treatment plans to preserve cultural places, and
- working with Native American groups to manage their cultural places.

Related Policy: RS.P-40

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

RS.I-28 Protect and promote the county's historic and prehistoric resources by:

- providing educational programs to the public, staff, and commissions that promote awareness of the county's history and the value in preserving historic or prehistoric resources; and
- exploring and developing historic or prehistoric sites that can be used appropriately as visitor-oriented destinations.

Related Policy: RS.P-38

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

RS.I-29: Develop historic preservation programs and development guidelines to prevent the loss of significant historic buildings and structures. This should be done in conjunction with Program SS.I-16.

Related Policy: RS.P-38

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

RECREATIONAL RESOURCES

Planning Context

The County's park and recreation facilities and programs are created to provide residents and visitors with opportunities for both active and passive recreation. Additionally they can provide further protection of natural resources as a complement to city and state parks and other protected open spaces in the county.

Solano County maintains three regional parks. Lake Solano Park is located at the base of the coast range foothills west of Winters and at the north end of the county along Putah Creek. The park contains a campground, picnic sites, group picnic facilities, a free boat launch for nonpowered vessels, parking, and public restrooms. Sandy Beach Park is located near Rio Vista on the Sacramento River. The park has a boat-launch ramp, campsites, picnic grounds, a hiking trail, roads for bicycling and driving, a beach, and volleyball and horseshoe pitch courts. A third regional park, Belden's Landing Water Access Facility, is located southeast of Suisun City in the Montezuma Slough/Grizzly Island area. The day-use facility includes a boat-launch ramp, a fishing pier, restrooms, and parking. Rockville Hills Regional Park is located in the unincorporated area but is owned and managed by the City of Fairfield. No neighborhood or community parks are located in the unincorporated area.

High quality and extensive recreational resources can greatly add to residents' quality of life. The County has the opportunity to expand its recreational resources by creating a connected trail network, improved bicycle routes, and additional parks and fishing access points. A second opportunity exists if federal, state, County, and city agencies coordinate efforts to implement recommendation and programs in the Park and Recreation chapter. Such coordination could result in greater recreation opportunities for the region's residents.

This section does not replace the Park and Recreation Element contained in Chapter 10 of this document. The policies and programs described below provide additional guidance on the development and management of parks, open space, and other recreational facilities.

These policies are intended to complement and support the policies contained in the Park and Recreation chapter.

Related Plans, Programs, and Agencies

Bay Trail Plan

Under SB 100 the Association of Bay Area Governments developed the *Bay Trail Plan*. The Bay Trail is planned to be a 400-mile, multi-use trail that will, when complete, encircle San Francisco Bay, linking the shorelines of 47 cities and nine counties. Currently, 290 miles of Bay Trail are complete. The trail is required to:

- provide connections to existing park and recreation facilities,
- create links to existing and proposed transportation facilities, and
- be planned in such a way as to avoid adverse effects on environmentally sensitive areas.

Implementation of the *Bay Trail Plan* will rely on Solano County to coordinate with the Association of Bay Area Governments, neighboring jurisdictions, property owners, land trusts, and other stakeholders.

Bay Area Ridge Trail Plan

The Bay Area Ridge Trail is envisioned as a more than 500-mile trail in the hills surrounding the San Francisco Bay Area that would serve hikers, trail runners, mountain bikers, and equestrians. The Bay Area Ridge Trail Council is a nonprofit organization that promotes, plans, acquires, builds, and maintains the trail. At the time of writing, 300 miles have been constructed and the council is working with landowners and regional and local government to close existing gaps.

Policies

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- | | |
|----------|--|
| RS.P-41: | Provide trail links and an integrated trail system to connect people to accessible open spaces and to regional trail routes. |
| RS.P-42: | Encourage the use of existing natural and human-made corridors such as creeks, railroad rights of way, and corridors when creating future bike path and trail alignments. |
| RS.P-43: | Support countywide recreation planning. |
| RS.P-44: | Support the provision of public lands for use in a trail network and where private land is necessary for creating connections for bike path or trail alignments. Work collaboratively with property owners to secure easements across private lands. |

Resources Chapter

- RS.P-45: Support the completion of regional trails that link destinations within Solano County and beyond, including the San Francisco Bay Trail, the Bay Area Ridge Trail and *Carquinez Trust Trail Plan*.
- RS.P-46: Encourage local farmers and ranchers to incorporate recreational and educational activities that provide visitor-oriented opportunities into agricultural land, in areas deemed appropriate for such opportunities.
- RS.P-47: Require recreational uses to be established in a manner compatible with agricultural activities or that minimizes an adverse impact on agriculture.
- RS.P-48: Maintain and expand public access and recreational activities within the Suisun Marsh consistent with applicable marsh policies and the protection of wildlife resources.

Implementation Programs

Funding, Physical Improvements, and Capital Projects

-
- RS.I-30: Acquire land within Suisun Marsh to provide for increased public duck hunting and additional refuge areas for waterfowl during the hunting season. Prioritize acquisition of those lands not now operated as managed wetlands.

Related Policy: RS.P-48

Agency/Department: Department of Resource Management

Funding Source: Grant funds

Time Frame: Ongoing

- RS.I-31: Seek funding to purchase land for public recreation and access to Suisun Marsh for such uses as fishing, boat launching, nature study, and for scientific and educational uses. These areas should be located on the outer portions of Suisun Marsh near the population centers and easily accessible from existing roads. Improvements for public use should be consistent with protection of wildlife resources.

Related Policy: RS.P-48

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

RS.I-32: Provide and encourage signage on roads leading into Suisun Marsh and maintained litter receptacles at major public use areas to prevent littering and vandalism of public and private property.

Related Policy: RS.P-48

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach and Education

RS.I-33: Review and consider recommendations under the *Solano Open Space Implementation Strategy*, in coordination with the Solano County Land Trust

Related Policies: RS.P-41, RS.P-42, RS.P-43, RS.P-44, RS.P-45, RS.P-46, RS.P-47, RS.P-48

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

RS.I-34: Look for successful examples of regional recreation planning or regional facilities and use those examples to influence future efforts. Such examples could include:

- *Tri-City and County Cooperative Plan for Agriculture and Open Space Preservation;*
- Green Valley Bike Path—a popular trail in Solano County;
- Sonoma County Agricultural and Open Space Preservatin District—a countywide open space district using a variety of tools to acquire land that is used as open space for a variety of reasons, including recreation;
- Marin County Open Space District—a countywide open space district using a variety of tools to acquire land that is used as open space for a variety of reasons, including recreation; and
- East Bay Regional Park District.

Resources Chapter

Related Policies: RS.P-41, RS.P-43

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

RS.I-35: Monitor levels of use in the Suisun Marsh to ensure that use intensity is compatible with other recreation activities and with protection of the Suisun Marsh environment.

Related Policy: RS.P-48

Agency/Department: Department of General Services; State Department of Fish and Game; Suisun Resource Conservation District; Bay Conservation and Development Commission

Funding Source: General Fund

Time Frame: Ongoing

Coordination with Other Agencies and Organizations

RS.I-36: Coordinate with cities, regional organizations, and neighboring counties to prepare a countywide trails plan to complete countywide and regional trail systems. These include pedestrian, bike, and equestrian trails; the regional Bay Area Ridge Trail; and Bay Trail.

Related Policies: RS.P-41, RS.P-42, RS.P-44, RS.P-45, TC.P-25

Agency/Department: Department of Resource Management; Department of General Services

Funding Source: General Fund

Time Frame: Ongoing

ENERGY RESOURCES AND CONSERVATION

This section discusses the identification of energy sources and the conservation and use of energy in Solano County. Other policies related to energy conservation, including land use patterns that decrease automobile use, are located in the Land Use chapter.

Planning Context

Energy resources are essential to achieving a high quality of life for county residents. Residents, workers, and visitors use energy resources in their daily lives in transportation, work, recreation, and relaxation. Transportation-related activities use the most energy, the majority of which is nonrenewable fossil fuels imported from outside the county. Fossil fuels are known to cause air pollution and climate change and are becoming an increasingly expensive and problematic fuel source. To ensure the availability and affordability of energy resources in the future, the County will need to increase the development of renewable energy sources and energy conservation. Solano County has been a leader in renewable energy production and will continue to increase its use of wind, solar, and other alternatives to fossil fuels.

Energy Resources

A variety of existing and potential sources of energy are located in Solano County. This section describes these resources, their roles in the county, and opportunities for development.

Fossil fuels, primarily in the form of gasoline and natural gas, currently produce the majority of the energy used in Solano County. While fossil fuels have been relatively inexpensive and readily available over the last 50 years, prices have increased dramatically over the last few years. Over the life of the General Plan, it is likely that environmental regulations, climate change strategies, national security requirements, and the depletion of the earth's oil reserves may cause fossil fuels to become a substantially more expensive and less viable fuel source. While fossil fuels are currently an important part of Solano's energy sources, alternatives to this type of energy are key to ensuring energy resources for the future.

No power plants powered by fossil fuels are located in Solano County, but three that provide a portion of the county's electricity are nearby. They are the Potrero Power Plant in San Francisco, the Pittsburg Power Plant in Pittsburg, and the Contra Costa County Power Plant in Antioch. All are powered primarily by natural gas.

Natural gas is harvested throughout Solano County and contributes to the economy in various ways. Most of the new gas retrieval is taking place in proven gas fields, though field boundaries are being extended when new drilling proves successful. Natural gas fields in Solano County are located

in the Denverton Creek field, East Dixon, Lindsey Slough, Van Sickle Island, Elkhorn Slough, Davis Southeast, Saxon, Ryer Island, Suisun Bay, the Rio Vista field and other parts of the county. One substantial natural gas storage area exists in the county at Kirby Hill.

Natural gas is a common fuel for commercial, industrial, and residential uses as well as electricity production. Natural gas is produced in Solano County and throughout California, though the majority is imported from other countries. Natural gas consumption in Solano County and the United States in general is expected to increase as it burns cleaner and causes relatively less-harmful pollution than other fossil fuels like coal and oil. While natural gas reserves are predicted to last slightly longer than oil reserves, natural gas is not a permanent fuel source, contributes to global warming, and cannot increase over the long run.

Though California has not recently experienced a natural gas shortage, the possibility of a shortage exists in the event of a colder-than-average winter, increased demand in other states, or a natural disaster. Both California and Solano County need to expand their ability to determine the adequacy of natural gas infrastructure and likelihood of peak demand spikes in the event of a shortage.

Gasoline is an important source of energy in the county as well, primarily for transit and automobiles. Essentially all of Solano County's petroleum is imported. However, substantial operations for refining petroleum are active in the county, including the Valero refinery in Benicia, and are important contributors to energy production and the local economy. While refinery operations are likely to continue throughout the life of the General Plan, the anticipated decline in fossil fuel production and use will eventually require that more renewable sources of energy production replace both the economic and energy-producing role of the refinery.

Solano County does not currently have a nuclear power plant. Concerns with waste disposal, safety in the event of a disaster, and radiation have made nuclear power unattractive to decision-makers as a source of future energy production; therefore, the County does not encourage the development of nuclear power plants.

Wind energy converts the movement of wind to electricity through mechanical wind turbines. Wind electricity can be generated both on a small scale in agricultural and residential land and on a large scale through wind farms. Climatic conditions have blessed Solano County with excellent wind energy resources, and the county is one of five major utility-scale producers of wind energy in California.

While the county has extensive wind energy resources, numerous environmental concerns remain related to wind turbines. The biggest of these issues is the potential for bats and birds to be caught in the turbines and killed. A number of design improvements which have become standard practice have reduced these potential effects on bat and bird populations.

The County has identified the Collinsville-Montezuma Hills south of SR 12 as the primary wind resource area in the county. Noncommercial accessory wind turbine installations are allowed with a building permit in any agricultural or natural resource zoning district. These types of installations are defined as less than 100 feet in height, with a total rated power output of 100 kilowatts or less. The guidelines and standards found within the General Plan implementation programs are directed at commercial, nonaccessory wind turbine installations. Agricultural lands within the county are particularly appropriate for wind harvesting as turbines generally do not interfere with daily agricultural operations and can provide additional revenue on these properties.

Wind energy development is inappropriate in certain areas of the county, in order to protect public health and safety and natural resources. These areas are urban areas, the Suisun Marsh Primary Management Area, the Stebbins Cold Canyon Natural Area, San Pablo Bay National Wildlife Refuge, and the Jepson Prairie preserve owned by the Solano Land Trust.

In other areas of the county, wind energy development will be processed under the normal use permit procedure. Additional documentation may be required due to lack of existing data. Wind energy development, depending on size and location of the project, may require both wind resource verification and an environmental impact report to meet CEQA requirements. The County incorporates by reference the most up-to-date mapping of wind resource areas available from the California Energy Commission, or subsequent agency, into the General Plan. Applicants seeking permits for commercial wind turbine installations shall be required to demonstrate that the wind resource in their area is adequate using the mapping, wind studies and technology current to their permit application. Any future development of wind energy must be consistent with Airport Land Use Plans and air operations of Travis Air Force Base and the Rio Vista Airport.

Solar energy uses the heat of the sun to produce electricity or to directly heat buildings or water. Solano County has numerous opportunities for the development of solar energy. Some small solar development has occurred throughout the county, including the Solano County Government Center. Solar energy is more practical on a smaller scale as it is space-intensive, and Solano County will continue to promote residential and commercial solar development in the future.

Hydroelectric facilities use rivers, streams, irrigation canals, and water treatment plants to generate electricity. Solano County contains some hydroelectric facilities, though most electricity production occurs at the Monticello Dam. The detrimental environmental effects of large dams make future large hydroelectric projects unlikely, but potential exists for development of additional small-scale hydroelectric projects in the county.

Geothermal power uses heat from below the earth's surface to produce electricity or to heat buildings and water systems. This type of power generation produces very little air pollution, is extremely reliable, and can

be used on a variety of scales including residential heating systems and large power plants that provide large amounts of electricity.

While geothermal power is currently being used in other parts of California, the potential for its use in Solano County is still largely unknown. Federal and state geologic surveys have not indicated that Solano County possesses any high-temperature resources useful for geothermal power production, but the potential for the discovery of geothermal resources remains.

Transformation projects, also known as resource recovery projects or "waste-to-energy" development, convert agriculture byproducts and municipal wastes to fuel or electricity. The transformation projects' primary purpose is to dispose of waste, but as waste decomposes, it releases a variety of gases that can be harvested for energy. Solano County currently produces large volumes of agricultural byproducts, much of which are disposed of by open burning. Transformation plants could be an alternative method of disposal, which would be beneficial in energy production and in the reduction of emissions associated with open burning.

Energy Efficiency Programs

Increasing efficiency, along with producing more renewable sources of energy, will assist the county in reducing its reliance on fossil fuels. The County has taken steps toward energy conservation in the construction of green County buildings such as the Solano County Government Center. Additional steps include reducing energy consumption in all new and existing residential, commercial, and industrial development. Conservation is best achieved by reducing electricity use through energy efficient appliances, solar orientation of buildings, and reduction in private automobile use through land use and transportation policies that encourage fewer and shorter vehicle trips. Energy conservation has numerous benefits beyond environmental stewardship, including financial savings for individual businesses and families.

Related Plans, Programs, and Agencies

The California Legislature has become increasingly interested in reducing the emissions from burning fossil fuels. Assembly Bill 32, passed in 2006, requires that California reduce carbon dioxide emissions to 1990 levels by 2020. While this legislation has profound energy implications, it has left many of the details of implementation to local jurisdictions and the private sector. Energy conservation measures and renewable energy sources will help Solano County to do its part to fulfill the requirements of Assembly Bill 32. A variety of state and national programs are relevant to reducing Solano County's energy use, and to developing renewable energy. These programs are referenced in the "Policies" and "Implementation Programs" sections.

Title 24

Title 24 in the California Code of Regulations delineates energy efficiency standards for residential and nonresidential buildings. The standards are updated periodically to incorporate new energy-efficient building technologies and methods.

Energy Star

Energy Star is a joint program of the United States Environmental Protection Agency and the Department of Energy. The program establishes criteria for energy efficiency for household products and labels energy efficient products with the Energy Star seal. Homes can be qualified as Energy Star homes as well if they meet efficiency standards. In California, Energy Star homes must use at least 15 percent less energy than the Title 24 regulations, pass the California Energy Star Homes Quality Insulation Installation Thermal Bypass Checklist Procedures, have Energy Star windows, and have minimal duct leakage.

Leadership in Energy and Environmental Design

Leadership in Energy and Environmental Design (LEED) is a program of the United States Green Building Council. Green buildings are LEED certified based on criteria for energy efficiency, environmental design, indoor environmental quality, water savings, and materials selection.

Community Choice Aggregation

Community Choice Aggregation permits any jurisdiction to aggregate the electric loads of residents, businesses, and public facilities to facilitate the purchase and sale of electrical energy, while each customer is given an opportunity to leave their community's aggregation program and thereby continue to be served by the incumbent distribution utility. The establishment of a Community Choice Aggregation program allows a jurisdiction greater choice in the source of its power, allows the purchase of renewable energy to increase, and does not necessarily increase the cost of electricity for its constituents.

Policies

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|----------|---|
| RS.P-49: | Ensure energy conservation and reduced energy demand in the county through required use of energy-efficient technology and practices. |
| RS.P-50: | Provide incentives for city and county residents and businesses to produce and use renewable sources of energy. |
| RS.P-51: | Promote Solano County as a model for energy efficiency and green building. |

Resources Chapter

- RS.P-52: Ensure adequate and affordable supplies of energy to meet the energy needs of the county.
- RS.P-53: Enable renewable energy sources to be produced from resources available in Solano County, such as solar, water, wind, and biofuels to reduce the reliance on energy resources from outside the county.
- RS.P-54: Reduce Solano County's reliance on fossil fuels for transportation and other energy-consuming activities.
- RS.P-55: Require responsible extraction, storage, and transportation of natural gas resources that minimize the impact on the natural environment.
- RS.P-56: Provide information, marketing, training, and education to support reduced energy consumption, the use of alternative and renewable energy sources, green building practices, recycling, and responsible purchasing.
- RS.P-57: Encourage the use of technology or siting to minimize adverse impacts from energy production facilities on the environment, including wildlife and agricultural resources.
- RS.P-58: Require the siting of energy facilities in a manner compatible with surrounding land uses and in a manner that will protect scenic resources.
- RS.P-59: Encourage on-site renewable energy production and use and energy conservation measures.

Implementation Programs

Regulations

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- RS.I-37: Amend and maintain the Zoning Ordinance to guide the siting of commercial, nonaccessory wind turbine installations. Include the following standards into the ordinance:
- Require a minimum setback of 1,000 feet or three times total turbine height, whichever is greater, from a dwelling unit, residential building site, or land zoned for residential uses.
 - Require a minimum setback of three times total turbine height from any zoning district (other than residential) which does not allow wind turbines.
 - Require a minimum setback of three times total turbine height from any property line, public

roadway, transmission facility, or railroad. This minimum setback may be waived in the case of wind farms located on adjacent parcels, provided an agreement has been reached between the neighboring property owners.

- Require a setback of 1/4 mile from the right-of-way of any scenic roadway.
- In the Cordelia Hills, wind energy development shall be set back to those areas which are beyond the sight of existing residential neighborhoods and areas planned for residential development, and set back to areas beyond view from I-80 and I-680. No turbine shall be sited within this zone.
- Define noncommercial wind energy generators as "wind-driven machines" that convert wind energy into production of electrical power for the primary purpose of on-site use and not for resale, that are 100 feet or less in height, and that have a total rated power output of 100 kilowatts or less.
- Establish a procedure for plan check and testing of wind electric generators prior to use permit or building permit approval. Certification of all detailed plans for electrical systems, electrical substations, support towers, and foundations by California licensed professional engineers shall be required. Performance testing of wind turbine generators shall be required to ensure against catastrophic failure.
- Include commercial wind turbine development as a permitted use in the following zone districts:
 - Exclusive Agricultural (A)
 - Limited Agricultural (A-L)
 - Water-Dependent Industrial (r-WD)
 - Limited Manufacturing (M-L)
 - General Manufacturing (M-G)
 - Watershed and Conservation (W)
- Non-commercial wind energy development shall be allowed in districts as currently provided for in the ordinance.

Related Policies: RS.P-22, RS.P-37

Agency/Department: Department of Resource Management

Resources Chapter

Funding Source: General Fund

Time Frame: By 2011

RS.I-38: Require all new and remodeled residential, commercial, industrial, institutional, and civic construction to exceed current (2008) Title 24 state energy-efficiency requirements by at least 20 percent, and require that all new residential homes and major renovations comply with the guidelines for the California Energy Star Homes Program. If the state increases the requirements of Title 24, examine the feasibility of increasing County energy efficiency requirements. Adopt an energy efficiency ordinance that requires upgrades as a condition of issuing permits for substantial remodels or additions. Require disclosure of the energy consumption of a home during the sale or lease of a residence or building.

Related Policies: PF.P-3 RS.P-49, RS.P-50, RS.P-51, RS.P-52, RS.P-54, RS.P-56

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: By 2011

RS.I-39: Restrict construction and drilling in tidal marsh and managed wetland areas to occur only during the dry months of the years to ensure these activities will not disturb wintering waterfowl.

Related Policies: RS.P-57, RS.P-58

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Funding, Physical Improvements, and Capital Projects

RS.I-40: Require all County operations to use renewable energy for 50 percent or more of their energy needs.

Related Policies: RS.P-51, RS.P-57

Agency/Department: Department of Resource Management

Funding Source:	General Fund
Time Frame:	Ongoing
RS.I-41:	Require that all new County buildings and major renovations and additions achieve LEED certification or meet equivalent performance standards. A LEED Silver certification level and reduced operational costs are preferred outcomes.
Related Policies:	RS.P-49, RS.P-50, RS.P-51, RS.P-52, RS.P-54, RS.P-56
Agency/Department:	Department of General Services
Funding Source:	General Fund
Time Frame:	Ongoing
RS.I-42:	Replace existing County vehicles with alternative fuel vehicles such as electric, hybrids, natural gas, and fuel cell powered vehicles. New County vehicles must be alternative fuel vehicles.
Related Policies:	RS.P-49, RS.P-50, RS.P-51, RS.P-52, RS.P-54, RS.P-56
Agency/Department:	Department of General Services
Funding Source:	General Fund
Time Frame:	Ongoing
RS.I-43:	Seal abandoned gas wells in accordance with Division of Oil and Gas regulations. Remove the drilling or production facilities and revegetate the surface area with native vegetation within one growing season after abandonment.
Related Policies:	RS.P-55
Agency/Department:	Department of Resource Management
Funding Source:	Project Applicants
Time Frame:	Ongoing
RS.I-44:	Partner with community services agencies to fund energy efficiency projects, including heating, ventilation, air conditioning, lighting, water heating equipment, insulation, and weatherization for low-income residents.
Related Policies:	RS.P-49, RS.P-50, RS.P-59

Resources Chapter

Agency/Department: Department of Resource Management

Funding Source: General Fund, community services agencies

Time Frame: Ongoing

RS.I-45: Execute an Energy Savings Performance Contract with a private entity to retrofit public buildings. This type of contract allows the private entity to fund all energy improvements in exchange for a share of the energy savings over a period of time.

Related Policies: RS.P-49, RS.P-51, RS.P-59

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Development Review

RS.I-46: Require residential development of more than six units to participate in the California Energy Commission's New Solar Homes Partnership and to construct LEED-certified units or meet equivalent performance standards. For new affordable housing projects, performance standards shall be established pursuant to the requirements of the funding source(s). Require new construction or major renovation of commercial and industrial buildings over 10,000 square feet in size to incorporate renewable energy generation to provide the maximum feasible amount of the project's energy needs. Commercial buildings shall incorporate renewable energy generation to provide at least 20 percent of the project's needs.

Related Policies: RS.P-50, RS.P-59

Agency/Department: Department of Resource Management

Funding Source: Project Applicants

Time Frame: Ongoing

RS.I-47: Require the use of Energy Star rated appliances and the most energy-efficient Energy Star rated water heaters and air conditioning systems that are feasible in the construction of new homes, in all substantial remodels when appliances are being replaced, and in any case where a permit is

needed to install or replace appliances (e.g., water heaters, air conditioning).

Related Policy: RS.P-49

Agency/Department: Department of Resource Management

Funding Source: Project Applicants

Time Frame: Ongoing

RS.I-48: Require all commercial, institutional, and industrial development to reduce potential urban heat island effect by using U.S. EPA-Energy Star rated roofing materials and light colored paint, using light colored paving materials for internal roads and parking, and using shade trees to shade south and west sides of new or renovated buildings and to achieve a minimum of 50 percent shading for all parking lots surfaces. Continue to ensure compliance with existing state building requirements for energy-conserving roofing materials on nonresidential buildings in new construction and reroofing. Amend the County Zoning Ordinance to encompass these requirements.

Related Policy: RS.P-49

Agency/Department: Department of Resource Management

Funding Source: Project Applicants

Time Frame: By 2011

RS.I-49: Require all off-road diesel powered vehicles used for construction to be newer model, low-emission vehicles, or use retrofit emission control devices, such as diesel oxidation catalyst and diesel particulate filters verified by the California Air Resources Board.

Related Policy: RS.P-54

Agency/Department: Department of Resource Management

Funding Source: Project Applicants

Time Frame: Ongoing

RS.I-50: During review of wind turbine generator proposals, consider the following:

- Wind turbine generators shall not be located in areas that conflict with the mission of Travis Air Force Base or other air operation facilities.
- Commercial turbines and non-commercial turbines over 100 feet in height or with a total rated power output of more than 100 kilowatts in designated wind resource areas require a public hearing and use permit approval by the Planning Commission.
- Following use permit approval, building permits and grading permits are required. Non-commercial turbines 100 feet or less in height and 100 kilowatts or less in rated power output require only building permits and grading permits.
- Submittal requirements for use permit applications within the wind resource areas include the following:
 - Permit application
 - Project description form (requires information on size and characteristics of project, physical and performance specifications of equipment, transmission system, certification, project schedule and phasing, circulation, and access).
 - Acoustical analysis
 - Archaeological survey
 - Geotechnical report (must correlate to standard County requirements for geotechnical analysis)
 - Site plan
 - Elevation package (elevation drawings to scale of proposed turbines and accessory uses).
 - Notification of the Federal Aviation Administration of any application with wind turbines over 200 feet in height within 20,000 feet of a runway of any airport.
 - Notification of the utility and the California Public Utilities Commission of application filing.

- Notification of application filing to microwave communications link owners within 2 miles of the proposed installation.
- Adjacent property owner's notification package.
- Current aerial photographs or panoramic photographs of the site.
- Evidence of liability and workers compensation insurance.
- Map locating all residences within 2 miles of the proposed project.
- Certification of detailed plans for electrical systems and transmission lines, substation, support towers, generators, and foundations by California licensed professional engineers (electrical, civil, and structural).
- Performance test documentation by a licensed engineer for all proposed turbine types.
- Contribution to escrow account for removal of inoperable or unsafe wind equipment and associated uses, including foundations.
- Following review of the applicant's site plan by County planning staff, a biological assessment would be required if it is determined that sensitive biological resources identified by the Resource Conservation Overlay (Figure RS-2) could be affected by the proposed project. If the proposed wind turbine siting would fall within or near areas of sensitivity, additional biological assessment of the probable impacts of the project would be required as part of the permit application. Findings of the biological assessment would determine need for biological resource monitoring and mitigation for protection of biological resources. For projects proposed in areas of low biological sensitivity, no additional biological information would be required.

Submittal requirements for building permit and grading permit applications shall be as follows:

- Completed permit application.

- "Planning for a Sustainable Solano County"
- Detailed plans and specifications for structures, foundations, electrical systems, certified by a California licensed professional engineer. Plans will be checked for compliance with such codes as the Uniform Building Code, the National Electrical Code, and applicable ANSI and IEEE standards.
 - Grading and erosion, sediment, and runoff control plans.
 - A standard set of minimum conditions would apply to every permit approval. These conditions could be modified or added to at the discretion of Resource Management Department staff, Planning Commission, or Board of Supervisors.

Additional environmental information beyond that required for permit processing would not be required for projects proposed within wind resource areas south of SR 12 in the Montezuma Hills.

In addition to the required safety setbacks, applicants would be required to demonstrate that the CNEL 50 influence area of proposed wind turbines would not coincide with residential areas or individual dwelling units. No turbines which exhibit high infrasonic noise generation potential would be permitted within one mile of residential uses or land zoned for residential uses.

The Zoning Ordinance should require a bond or other guarantee, such as a contribution to an escrow account, for removal of inoperable or unsafe wind equipment and associated uses, including foundations, after use permit approval.

Related Policies: RS.P-22, RS.P-50, RS.P-52, RS.P-53, RS.P-54, RS.P-56, RS.P-57, RS.P-58

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

RS.I-51: Adopt a County "green building program." Require all new and renovated commercial, office, and institutional buildings over 10,000 square feet in size to achieve LEED certification, or meet equivalent performance standards. Amend the County Zoning

Ordinance to encompass these green building requirements. Provide permitting-related and other incentives for building projects that exceed the County's energy efficiency standards by greater than 5 percent.

Related Policies: RS.P-49, RS.P-50, RS.P-51, RS.P-52, RS.P-54, RS.P-56

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

RS.I-52: Require that development projects use landscaping and site design techniques that minimize energy use. These may include designing landscaping to shield or expose structures to maximize energy conservation or acquisition; and taking advantage of orientation, sun-shade patterns, prevailing winds, landscaping, and sunscreens. Amend development standards to require such techniques.

Related Policies: RS.P-49, RS.P-50, RS.P-51, RS.P-52, RS.P-54, RS.P-56

Agency/Department: Department of Resource Management

Funding Source: Project Applicant

Time Frame: Ongoing

RS.I-53: Review studies and reports and incorporate recommended standards and guidelines to reduce bird and bat mortality rates. These guidelines may include new technology or alternative siting of turbines. The standards and guidelines shall incorporate the California Energy Commission's *Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development* or any superseding guidelines and recommendations of the energy and wildlife resource agencies for wind power projects.

Related Policies: RS.P-50, RS.P-52, RS.P-53, RS.P-54, RS.P-56, RS.P-57, RS.P-58

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Resources Chapter

RS.I-54: Provide safeguards and require compliance for the production, injection, and drilling of natural gas deposits.

Related Policies: RS.P-50, RS.P-55, RS.P-56, RS.P-57

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

RS.I-55: Require the design and orientation of all buildings to maximize passive solar heating during cool seasons, avoid solar heat gain during hot periods, enhance natural ventilation, and promote effective use of daylight. Orientation should optimize opportunities for on-site solar generation.

Related Policies: RS.P-49, RS.P-51, RS.P-56, RS.P-59

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

RS.I-56: Where feasible, include appropriate facilities in new buildings to support the use of low/zero carbon fueled vehicles. This may include charging stations for electric vehicles which use green electricity sources.

Related Policies: RS.P-50, RS.P-54, RS.P-59

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach and Education

RS.I-57: Investigate the feasibility of using solar (photovoltaic) streetlights instead of conventional streetlights.

Related Policy: RS.P-49

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: By 2011

RS.I-58:	Protect the viability of renewable energy generation within the county by protecting resources such as solar access on buildings and high value wind energy sites. Facilitate the development of renewable energy generation in the county through the provision of streamlined permitting processes.
Related Policies:	RS.P-50, RS.P-53, RS.P-56
Agency/Department:	Department of Resource Management
Funding Source:	General Fund
Time Frame:	Ongoing
RS.I-59:	Promote public awareness of energy conservation and efficiency through the development of a publicity program. This program shall include information describing how residents can retrofit existing homes for increased energy efficiency. Encourage the use of low-carbon and renewable fuels and zero emissions technologies.
Related Policies:	RS.P-49, RS.P-50, RS.P-51, RS.P-52, RS.P-54, RS.P-56
Agency/Department:	Department of Resource Management
Funding Source:	General Fund
Time Frame:	Ongoing
RS.I-60:	Conduct studies that identify methods to expand renewable energy production in the county. Methods may include incentives such as expedited permit processing, reduced fees, and technical assistance to encourage energy-efficiency technology, research and practices.
Related Policies:	RS.P-50, RS.P-52, RS.P-53, RS.P-54, RS.P-56
Agency/Department:	Department of Resource Management; Department of General Services
Funding Source:	General Fund
Time Frame:	By 2011
RS.I-61:	Investigate the feasibility and benefit of establishing a Community Choice Aggregation program by analyzing energy production costs and by establishing a stakeholder advisory group.

Resources Chapter

Related Policies: RS.P-49, RS.P-50, RS.P-51, RS.P-52, RS.P-54, RS.P-56

Agency/Department: Department of General Services

Funding Source: General Fund

Time Frame: Ongoing

RS.I-62: Ensure that natural gas storage facilities meet all safety standards of the Division of Oil and Gas.

Related Policy: RS.P-55

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

RS.I-63: Require energy and water efficiency audits for new construction or substantial remodels of commercial, industrial, and institutional buildings. Examine existing usage and potential reductions related to heating, ventilation, air conditioning, lighting, water heater equipment, insulation, weatherization, and water usage by buildings and landscaping. Require energy and water audits of all County buildings.

Related Policies: RS.P-50, RS.P-54, RS.P-59

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

COMMUNITY SEPARATORS

Planning Context

Numerous communities in Solano County have expressed a common desire to maintain a distinct sense of identity and to remain physically separated from other cities. Community separators are an effective means of achieving this goal. All the cities in the county, as well as some neighboring communities, have established agreements and plans in order to maintain land between communities in open space and agricultural uses.

In addition, the County has created the Agricultural Reserve Overlay to contribute to the cities' efforts. The intent of the overlay is to preserve the valued agricultural landscapes that exist in the areas between Vacaville

and Dixon and between Dixon and Davis by encouraging private landowners to voluntarily participate in land conservation. A community separator between Benicia, Vallejo, and Fairfield is similarly maintained through provisions of the Tri-City Cooperative Planning Area overlay.

The Agricultural Resource Overlay designation will serve as an agricultural mitigation bank for development projects subject to County and city agricultural mitigation programs. Projects affecting agricultural resources in other areas of the county or in participating cities could mitigate this impact by paying in-lieu fees used to purchase agricultural easements from willing landowners within the overlay area. Easements would be held by the County, cities, or relevant land trusts, while the landowner maintains ownership and management control.

The Agricultural Resource Overlay will help facilitate the County's various farmland protection goals identified in the Agriculture Chapter, and will help maintain scenic resources along the Interstate 80 corridor. The overlay will also assist the cities' existing agriculture, open space, and urban growth management efforts.

Related Plans, Programs, and Agencies

As mentioned previously, the cities in the county have engaged in plans and agreements to maintain land in open space and agricultural uses. These programs are described below.

Vacaville-Dixon Greenbelt

The Vacaville-Dixon Greenbelt Authority was established in 1995. The purpose of the greenbelt is to guarantee that certain lands located between the two cities remains an agricultural landscape in perpetuity. The greenbelt is implemented through acquisition from willing sellers and resale of the properties with a permanent conservation easement. A joint powers agreement ensures the preservation of the land.

Vacaville-Fairfield Greenbelt

Vacaville and Fairfield have adopted policies to create a community separator between the two cities. This area is governed by the Vacaville-Fairfield-Solano Greenbelt Authority. The aim of the separator is to establish a permanent, one-mile-wide, open space greenbelt that serves as a community separator, a setting for recreational activities, a buffer between agricultural and urban areas, and as an ultimate limit for urban growth.

Tri-City and County Cooperative Plan for Agriculture and Open Space Preservation

Benicia, Fairfield, Vallejo, and Solano County have jointly created the TriCity and County cooperative Planning Group which prepared and approved *the Tri-City and County Cooperative Plan for Agriculture and*

"Planning for a Sustainable Solano County"

Open Space Preservation. The plan aims to create a physical and visual separation between the three involved cities. The plan was created in response to concerns of encroaching development, the loss of agricultural lands, and the diminishing separation between communities. The cities and County created policies and implementation programs that address these issues and support the protection of the planning area's agricultural, biological, and scenic resources.

Dixon-Davis Greenbelt

The cities of Dixon and Davis (Yolo County), the Solano Land Trust, and federal and state agencies have entered into a partnership with the goal of permanently protecting the prime farmlands and scenic resources of the area located between the two cities.

Vallejo-Benicia Separator

The cities of Vallejo and Benicia established by agreement a separator between these two cities. This area includes Benicia State Park and an open space corridor running north of Interstate 780 and Columbus Parkway.

Policies

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- RS.P-60: Work with cities to maintain open space separators around cities to preserve their identity and character.
 - RS.P-61: Retain rural character in areas between cities by promoting agricultural uses within community separators.
 - RS.P-62: Retain community separators of sufficient size to ensure the continued economic sustainability of areas in productive agricultural use.
 - RS.P-63: Encourage cities to maintain defined community separators in appropriate productive agricultural or open space use.

Implementation Programs

Regulations

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- RS.I-64: Amend the Zoning Ordinance to implement the Agricultural Resource Overlay. This area is used to delineate those areas of special concern where agricultural lands are subject to the greatest development pressure. This overlay should be combined with a program to direct agricultural mitigation efforts toward these areas.

Related Policies: RS.P-60, RS.P-61, RS.P-63

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Amend by 2011, Ongoing

Coordination with Other Agencies and Organizations

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| RS.I-65: | <p>Participate with cities and special districts in establishing agreements that delineate community separators. Support agreements that are already in place. Existing agreements and programs include the following:</p> <ul style="list-style-type: none"> ▪ Tri City/County Agriculture and Open Space program ▪ Vacaville-Fairfield Greenbelt ▪ Vacaville-Dixon Greenbelt ▪ Dixon-Davis Greenbelt ▪ Vallejo-Benicia Separator |
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Related Policy: RS.P-60

Agency/Department: Department of Resource Management; cities

Funding Source: General Fund

Time Frame: Ongoing

WATER RESOURCES AND QUALITY

Planning Context

Water is a resource of great importance to the County's economy, its natural systems, and to residents' quality of life. Solano County has diverse surface and groundwater resources. Appropriate management of these critical resources is achieved via three strategies: watershed protection, preservation and improvement of water quality, and efficient management of water supply and demand. Watershed protection involves safeguarding the recharge and filtering capacities of undisturbed natural areas. Water quality can be protected by incorporating low-impact development techniques and other best management practices into new development projects or by retrofitting the existing urban landscape. Using appropriate agricultural practices can also benefit water quality and aquatic ecosystems. As urban populations grow, balancing water supply and demand becomes increasingly important. Policies that address efficient water use at the residential, commercial,

and municipal level can greatly improve the county's future water security.

Groundwater Resources

Before completion of the Solano Project in 1959, groundwater was extensively used in Solano County both for municipal supplies and for agriculture. The Solano Project refers to the water supply created by a federal dam project and stored in Lake Berryessa. One of the main reasons for the development of the Solano Project was to correct the groundwater overdraft occurring in some agricultural areas. Once the Solano Project started making agricultural water deliveries, groundwater levels rebounded. In general, the county's groundwater levels are stable, dropping in dry years, and rebounding in wet years. The Cities of Rio Vista and Dixon are still served exclusively with groundwater from basins under the cities. Vacaville gets approximately one-third of its municipal water supply from groundwater located under the city. Most of the growers within the Solano Irrigation District, Maine Prairie Water District, and Reclamation District No. 2068 use surface water. Growers outside of districts that provide surface water rely entirely on groundwater. Most rural residential landowners have individual shallow groundwater wells that serve their domestic needs. Some small rural residential water systems also distribute groundwater to their customers. Isolated concerns about groundwater supplies in the area north of Vacaville prompted the formation of the Rural North Vacaville Water District.

Surface Water Resources

Solano County has a variety of surface water resources including creeks, drainages, sloughs, marshes, and extensive infrastructure for delivering water for irrigation and municipal uses. Through the Solano Project, Putah Creek and Lake Berryessa provide the majority of the county's surface water for urban and agricultural consumption. The Suisun Marsh and other marshlands located along the Bay-Delta play an important role in maintaining and protecting water quality for human and natural communities. Intact riparian corridors are also important resources in the county for the protection of water quality in urban and rural areas. Even so, many of the county's water bodies have been identified by federal and state agencies as not meeting mandated water quality standards for total maximum daily loads (TMDLs) of certain pollutants. Of particular concern are the water bodies with high levels of pesticide (diazinon), Polychlorinated biphenyls (PCB), and mercury pollutants.

Numerous water-related issues face the County and its residents, farms, and businesses. Allocation of this scarce resource is at the heart of two important challenges facing the County. Providing adequate quantities of water to ensure the viability of endangered species and aquatic and riparian habitat will remain a crucial aspect of water management plans and operations. Of particular importance are the water transfers to the North Bay Aqueduct and the resulting impact on delta smelt and the Solano Water Project allocations for the maintenance of salmonid species in Putah Creek.

A second issue facing the County is the potential for decreased water availability for human consumption that may result from the previously discussed allocations for environmental enhancement and habitat protection. Reduced water supply could affect water supply reliability, which in turn could impact the County's ability to support proposed land uses. Many of the potential strategies to increase water supply in the county are tied to statewide water issues, where similar uncertainty and conflicts exist.

Other water related issues include improving water quality in the North Bay Aqueduct, modernizing Solano Water Project infrastructure, and improving water demand management estimates by coordinating the Solano County Water Agency's future plans with city and County general plan population projections.

Related Plans, Programs, and Agencies

Solano County Water Agency

Solano County Water Agency (SCWA) was established in 1951 to provide untreated water to water service agencies in Solano County from the federal Solano Project and the North Bay Aqueduct of the State Water Project. SCWA is responsible for delivering water to water service agencies and monitoring efforts to mitigate stormwater runoff. SCWA requires the cities in Solano County to adequately mitigate the impacts of stormwater runoff from development projects.

State Water Resources Control Board

The State Water Resources Control Board (SWRCB) was created by the California Legislature in 1967. The mission of the SWRCB is to ensure the highest reasonable quality for waters of the state, while allocating those waters to achieve the optimum balance of beneficial uses. The joint authority of water allocation and water quality protection enables the SWRCB to provide comprehensive protection for California's waters.

Nine regional water quality control boards work under the SWRCB to develop and enforce water quality objectives and implementation plans that will best protect the beneficial uses of the state's waters. Each RWQCB recognizes local differences in climate, topography, geology, and hydrology. Solano County is within the jurisdiction of the San Francisco Bay RWQCB and the Central Valley RWQCB.

Regional Water Quality Control Board

State water quality is regulated/administered by the SWRCB and its nine RWQCBs. Solano County is within the jurisdiction of the San Francisco Bay RWQCB and the Central Valley RWQCB. The state and RWQCBs also maintain independent regulatory authority over the placement of waste, including fill, into waters of the state under the Porter-Cologne Water Quality Control Act. See Figure PF-2 in Chapter 8 for a map of the RWQCBs.

Section 10 Rivers and Harbors Act of 1899

Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the Secretary of the Army, acting through the U.S. Army Corps of Engineers, for the construction of any structure in or over any navigable water of the United States.

In general, activities regulated under Section 10 of the Rivers and Harbors Act are similar to Section 404 of the Clean Water Act, but the geographic extent of jurisdiction is much more restricted and is limited to identified navigable waters of the United States. In Solano County, navigable waters are limited to the current and historic (as of 1899) tidal channels in Suisun Bay, Suisun Marsh, the Delta, and the Sacramento River.

National Pollutant Discharge Elimination System

In 1972, the Clean Water Act was amended to make the discharge of pollutants to waters of the United States from any point source unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. In California, the Environmental Protection Agency delegates much of the implementation of the Clean Water Act to the SWRCB. NPDES permits cover industrial and municipal discharges, discharges from storm sewer systems in larger cities, stormwater associated with numerous kinds of industrial activity, runoff from construction sites, and developments disturbing more than 1 acre of soil, mining operations, and animal feedlots and agricultural facilities above certain thresholds. Permits require the preparation of a storm water pollution prevention plan. This is an operational plan that identifies and describes the best management practices to be implemented to reduce impacts on water quality and aquatic habitat.

Solano County's Storm Water Management Plan (SWMP) is consistent with NPDES requirements and procedures. The SWMP establishes a process for the review of development site plans to address long-term water quality issues and impacts associated with the proposed land uses following construction.

Wastewater discharges from wastewater treatment plants are also required to have an NPDES permit. The findings of the NPDES permit process provide information about recommended treatment plant design and operations, beneficial uses to be protected, and applicable standards.

Federal Clean Water Act

The federal Clean Water Act, administered by the Environmental Protection Agency, employs a variety of regulatory and nonregulatory tools to reduce pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve a broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that

they can support the protection and propagation of fish, shellfish, and wildlife.

Section 401 of the Clean Water Act requires an applicant to obtain certification for any activity that may result in a discharge of a pollutant into waters of the United States. The RWQCB also plays a role in review of water quality and wetland issues, including avoidance and minimization of impacts. Solano County is within the jurisdiction of the San Francisco Bay RWQCB and Central Valley RWQCB.

Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers has jurisdiction over wetlands and waters of the United States. Permitting of activities that could discharge fill or dredge materials or otherwise adversely modify wetlands or other waters of the United States and associated habitat is required. Permits authorized by the U.S. Army Corps of Engineers under the act typically involve mitigation to offset unavoidable impacts on wetlands and other waters of the United States in a manner that achieves no net loss of wetland acres or values.

Section 303(d) of the Clean Water Act requires states to develop lists of water bodies (or segments of water bodies) that will not attain water quality standards after implementation of minimum required levels of treatment by point source dischargers (e.g., municipalities and industries). Section 303(d) requires states to develop TMDL for each of the listed pollutants and water bodies. A TMDL is the amount of loading that the water body can receive and still meet water quality standards.

Urban Water Management Planning Act (Senate Bill 318)

Each urban water supplier in California is required to prepare an Urban Water Management Plan (UWMP) and update the plan on or before December 31 in years ending in 5 and 0, pursuant to California Water Code Sections 10610–10657.

Amendments to SB 318 have focused on ensuring that the UWMP emphasizes and addresses drought contingency planning, water demand management, reclamation, and groundwater resources. Under the current law, all urban water suppliers with more than 3,000 service connections or water use of more than 3,000 acre-feet per year are required to submit a UWMP to the California Department of Water Resources every 5 years.

Senate Bill 610

SB 610 became active January 1, 2002. The purpose of SB 610 is to strengthen the process by which local agencies determine whether current and future water supplies are adequate and sufficient to meet current and future demand. SB 610 amended the California Public Resources Code to incorporate Water Code requirements within the CEQA process for certain types of projects. SB 610 also amended the Water Code to broaden the types of information included in an UWMP (Water Code Section 10610 et seq.).

Water Code Part 2.10

Water Code Part 2.10 clarifies the roles and responsibilities of the lead agency under CEQA and the water supplier (i.e., the public water system) with respect to describing current and future supplies compared to current and future demand. It also defines the projects for which a water supply assessment (WSA) must be prepared as well as the responsibilities of the lead agency related to the WSA. A WSA is required for:

- proposed residential developments of more than 500 dwelling units;
- proposed shopping centers or business establishments employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- proposed commercial office buildings employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- proposed hotels or motels, or both, having more than 500 rooms;
- proposed industrial, manufacturing, or processing plants, or industrial parks planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area;
- mixed-use developments that include one or more of the uses described above;
- developments that would demand an amount of water equivalent to or greater than the amount of water required by a 500-dwelling-unit project; and
- for lead agencies with fewer than 5,000 water service connections, any new developments that will increase the number of water service connections in the service area by 10 percent or more.

Under Part 2.10, the lead agency must identify the affected water supplier and ask the supplier whether the new demand associated with the project is included in the supplier's UWMP. If the UWMP includes the demand, it may be incorporated by reference in the WSA (Water Code Section 10910[c][2]). If no public water system exists to serve the project, the lead agency must prepare the WSA itself (Water Code Section 10910[b].).

Senate Bill 221

SB 221 requires a county or city to include, as a condition of approval of any tentative map, parcel map, or development agreement for certain

residential subdivisions, a requirement that a "sufficient water supply" be available. Proof of a sufficient water supply must be based on a written verification from the public water system that would serve the development.

Policies

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|----------|--|
| RS.P-64: | Identify, promote, and seek funding for the evaluation and remediation of water resource or water quality problems through a watershed management approach. Work with the regional water quality control board, watershed-focused groups, and stakeholders in the collection, evaluation and use of watershed-specific water resource information. |
| RS.P-65: | Require the protection of natural water courses. |
| RS.P-66: | Together with the Solano County Water Agency, monitor and manage the county's groundwater supplies. |
| RS.P-67: | Encourage new groundwater recharge opportunities. |
| RS.P-68: | Protect existing open spaces, natural habitat, floodplains, and wetland areas that serve as groundwater recharge areas. |
| RS.P-69: | Preserve and maintain watershed areas characterized by slope instability, undevelopable steep slopes, high soil erosion potential, and extreme fire hazards in agricultural use. Watershed areas lacking water and public services should also be kept in agricultural use. |
| RS.P-70: | Protect land surrounding valuable water sources, evaluate watersheds, and preserve open space lands to protect and improve groundwater quality, reduce polluted surface runoff, and minimize erosion. |
| RS.P-71: | Ensure that land use activities and development occur in a manner that minimizes the impact of earth disturbance, erosion, and surface runoff pollutants on water quality. |
| RS.P-72: | Preserve riparian vegetation along county waterways to maintain water quality. |
| RS.P-73: | Use watershed planning approaches to resolve water quality problems. Use a comprehensive stormwater management program to limit the quantity and increase the water quality of runoff flowing to the county's streams and rivers. |
| RS.P-74: | Identify naturally occurring and human-caused contaminants in groundwater in new development |

projects and develop methods to limit and control contaminants. Work with RWQCB to educate the public on evaluating the quality of groundwater.

- RS.P-75: Require and provide incentives for site plan elements (such as permeable pavement, swales, and filter strips) that limit runoff and increase infiltration and groundwater recharge.
- RS.P-76: Promote sustainable management and efficient use of agricultural water resources.

Implementation Programs

Regulations

RS.I-66: Establish development standards that maximize retention of runoff and regulate development to avoid pollution of storm water, water bodies, and groundwater.

Related Policies: RS.P-71, RS.P-73, RS.P-74, RS.P-75

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: By 2011

RS.I-67: Develop an ordinance that establishes a riparian buffer to protect water quality and ecosystem function. The minimum buffer width shall be determined according to existing parcel size. For parcels more than 2 acres in size, a minimum 150-foot development setback shall be provided. For parcels of 0.5-2.0 acres, a minimum 50-foot setback shall be provided. For parcels less than 0.5 acre a minimum 20-foot setback shall be provided. Exceptions to these development setbacks apply to parcels where a parcel is entirely within the riparian buffer setback or development on the parcel entirely outside of the setback is infeasible or would have greater impacts on water quality and wildlife habitat.

Related Policies: RS.P-68, RS.P-70, RS.P-72

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: By 2011

Funding, Physical Improvements, and Capital Projects

RS.I-68:	Seek funding opportunities for collaborative watershed planning approaches to water quantity and quality enhancement and protection, where such an approach is the desired method of accomplishing the program objectives.
Related Policies:	RS.P-67, RS.P-68, RS.P-69, RS.P-70
Agency/Department:	Department of Resource Management
Funding Source:	General Fund
Time Frame:	Ongoing
RS.I-69:	Protect natural watercourses through acquisition or dedication of adjacent land in fee or less than fee title during the process of reviewing and approving land development proposals.
Related Policy:	RS.P-65
Agency/Department:	Department of Resource Management
Funding Source:	Project Applicant
Time Frame:	Ongoing
RS.I-70:	Require site plan elements to limit runoff from new development. These measures might include reduced pavement or site coverage, permeable pavement, vegetation that retains and filters stormwater, and/or drainage features. Limit the construction of extensive impermeable surfaces and promote the use of permeable materials for surfaces such as driveways, streets, parking lots, and sidewalks.
Related Policies:	RS.P-73, RS.P-74, RS.P-75
Agency/Department:	Department of Resource Management
Funding Source:	Project Applicant
Time Frame:	Ongoing
RS.I-71:	Require proposed projects located within the Putah Creek and Ulatis Creek watersheds to minimize project-related stormwater runoff and pollution. Stormwater runoff and pollution loads resulting after development of projects shall not exceed predevelopment conditions.

Resources Chapter

Related Policies: RS.P-1, RS.P-72

Agency/Department: Department of Resource Management

Funding Source: Project Applicant

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach and Education

RS.I-72: Seek and secure funding sources for development of countywide water quality assessment, monitoring, remedial and corrective action, awareness/education programs. Provide technical assistance to minimize stormwater pollution, support RWQCB requirements, and manage related County programs. Consider future use of desalinization to supplement water supplies.

Related Policy: RS.P-64

Agency/Department: Department of Resource Management; SCWA; State Water Resources Control Board; Department of Water Resources; California Department of Health Services; the California Environmental Protection Agency; the U.S. Bureau of Land Management; U.S. Bureau of Reclamation; and applicable federal, County, and city agencies

Funding Source: General Fund

Time Frame: Ongoing

RS.I-73: Develop a public education and technical assistance program that provides property owners, applicants, and the general public with information regarding stormwater pollution, efficient water use, public water supplies, water conservation and reuse, and groundwater.

Related Policy: RS.P-75

Agency/Department: Department of Resource Management; Solano County Water Agency; Resource Conservation Districts

Funding Source: General Fund

Time Frame: Ongoing

RS.I-74:	Continue to require best management land use practices in the Barker Slough watershed.
Related Policy:	RS.P-73
Agency/Department:	Department of Resource Management
Funding Source:	General Fund
Time Frame:	Ongoing
RS.I-75:	Together with the SCWA and the cities, create and maintain a comprehensive database of information regarding groundwater supply and quality. Seek funding to complete a countywide groundwater study that fills the gaps among aquifer-specific studies. Coordinate with the SCWA to get more information on its groundwater study and subsequent groundwater management programs.
Related Policy:	RS.P-66
Agency/Department:	Department of Resource Management; SCWA; Cities
Funding Source:	General Fund
Time Frame:	Ongoing
RS.I-76:	Inform the public about practices and programs to minimize water pollution and provide educational and technical assistance to farmers and landowners to reduce sedimentation and increase on-site retention and recharge of storm water.
Related Policy:	RS.P-74
Agency/Department:	Department of Resource Management; Solano County Water Agency; Resource Conservation Districts
Funding Source:	General Fund
Time Frame:	Ongoing

Coordination with Other Agencies and Organizations

RS.I-77:	Coordinate with federal and state agencies to monitor the extent of endocrine disruptor pollutants (synthetic compounds that mimic certain hormones and effect body functions such as immune and reproductive system) in the county's water supply and water bodies. Create an action plan to reduce
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Resources Chapter

such pollutants, if pollutants are found to exist at unacceptable levels.

Related Policies: RS.P-64, RS.P-66

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

RS.I-78: Explore a cooperative city/County program to compensate farmers and/or landowners to preserve farmland for watershed preservation and maintenance.

Related Policies: RS.P-68, RS.P-69, RS.P-70

Agency/Department: Department of Resource Management; Solano County Water Agency; Cities

Funding Source: General Fund

Time Frame: Ongoing

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CHAPTER

5 PUBLIC HEALTH AND SAFETY

INTRODUCTION

Health and safety within Solano County are concerns for every resident. This chapter of the General Plan presents the County's vision to protect people and property from natural and human-made hazards, promote public health, preserve air and water quality, and guide development in a sustainable manner that respects the needs of both people and the environment. The guiding vision statement developed by the General Plan Citizens' Advisory Committee specifically references a desire to protect health and safety within the county. This vision states:

We will use our natural habitat, farmlands, and water resources to maintain separation among our cities and unincorporated communities. These features will continue to contribute to our identity and economy and help to protect our people from flooding and other natural hazards.

Because we value the quality of our air, soil, water, and other finite natural resources, we will continue to preserve agricultural lands and support practices that use renewable and recycled resources and reduce energy consumption and pollution as much as possible.

We will also promote public health, safety and security, and environmental justice as part of an equitable society.

Based on these statements, the major strategies in the Public Health and Safety chapter are:

- maintaining distance between hazards and humans with agricultural lands and open space,
- improving air quality on a regional scale through partnerships with other Bay Area organizations, and
- promoting development that works with nature to slow global climate change and its impact on nature and reduce human risks associated with environmental hazards, including hazards created or increased by climate change.

Policies proposed in each section of this chapter address these general health and safety strategies. Programs to implement these policies are also presented to ensure that each policy can be carried out.

Purpose

The public health and safety goals, policies, and implementation programs are designed to guide the County toward a healthier and safer future. To provide a framework for this effort, the Governor's Office of Planning and Research has established guidelines for the content of general plans in California. The Safety and Noise sections included in this Public Health and Safety chapter are required by state law to address specific issues. Although not required as a separate general plan element, state guidelines also recommend that air quality be addressed in a local general plan, either as a separate, optional, element or through policies in a mandatory element (such as Conservation).

A general plan must examine issues related to protecting the community from any unreasonable risks associated with:

- seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure;
- slope instability leading to mudslides and landslides;
- subsidence, liquefaction, and other seismic hazards identified on seismic hazard maps;
- other known geologic hazards;
- flooding; and
- wildland and urban fires.

It must also address the following as they relate to known fire and geologic hazards:

- evacuation routes and signage;
- peak load water supply requirements;
- military installations;
- minimum road widths and turnouts; and
- clearances around structures.

Issues to be addressed by the Noise section include:

- major noise sources, both mobile and stationary;
- existing and projected levels of noise and noise contours for major noise sources;

- existing and projected land uses and their proximity to existing and projected noise sources;
- existing and proposed sensitive receptors, including:
 - hospitals,
 - convalescent homes,
 - schools,
 - churches, and
 - sensitive wildlife habitat, including the habitat of rare, threatened, or endangered species;
- the extent of "noise problems in the community" (survey of community to determine location and extent);
- methods of noise attenuation and the protection of residences and other sensitive receptors from excess noise; and
- implementation and possible solutions that address existing and foreseeable noise problems.

Issues that could be addressed in an optional Air Quality element or section of the general plan include:

- meteorological conditions affecting air quality and a description of the area's current air quality attainment status;
- ambient air quality based on data from local monitoring stations;
- applicable federal and state standards and laws pertaining to air pollution;
- the types of sources of stationary and mobile air pollution;
- amounts of emissions produced by different sources of air pollution;
- reference to applicable regional or local air quality plans; and
- state, regional, and local transportation programs that affect the type and location of transportation facilities.

Scope and Content

This chapter begins by introducing the County's health and safety goals. Separate sections describing various hazards and their potential impacts on the county follow. These topics include:

- flood control

- seismic safety and land stability
- fire safety
- hazardous materials
- disaster preparedness
- public health
- air quality
- noise

Each section contains a summary of current conditions followed by a brief overview of applicable federal, state, regional, or County agencies, plans, or programs. Policies and implementation programs specific to each topic follow this introduction and are used to ensure that public health and safety goals are accomplished.

Relationship to Other General Plan Chapters

The Noise and Safety sections included in this chapter are related to the rest of the General Plan, specifically the Land Use, Transportation and Circulation, and Housing chapters.

Protecting residents and their property from undue harm requires the County to identify areas that are unsuitable for future development. The Public Health and Safety chapter achieves this by documenting locations of known natural hazards and areas of excessive noise. These findings will guide:

- land use decisions minimizing human exposure to dangerous areas;
- circulation policies informing the placement of new roads and other infrastructure, such as utility lines, oil and gas pipelines, and aqueducts; and
- housing locations protecting residences and other noise-sensitive uses from unacceptable sound levels.

The policies and implementation programs found within this chapter are supported by those in the rest of the General Plan.

GOALS

The goals of the Public Health and Safety chapter address the County's desire to protect its residents, their property, and the environment from natural and human-caused hazards. They address the previously stated strategies of:

- maintaining distance between hazards and humans;

- improving air quality on a regional scale; and
- promoting development that works with nature.

The following goals provide a general framework for County health and safety, within which the separate topic areas expand to provide policies and programs.

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|----------------|--|
| HS.G-1: | Minimize the potential for loss of life and property resulting from natural or human-caused hazards. |
| HS.G-2: | Improve air quality in Solano County, and by doing so; contribute to improved air quality in the region. |
| HS.G-3: | Protect people living, working, and visiting Solano County from the harmful impacts of excessive noise. |
| HS.G-4: | Protect important agricultural, commercial, and industrial uses in Solano County from encroachment by land uses sensitive to noise and air quality impacts. |
| HS.G-5: | Recognize the multiple functions of the natural environment for safety, recreation, protection from climate changes, and economic uses. |
| HS.G-6: | Increase awareness of the effect humans have on the environment and encourage individuals and organizations to modify habits and operations that cause degradation to the environment and contribute to climate change. |
| HS.G-7: | Prepare for and adapt to the effects of climate change. |

FLOOD CONTROL

Flooding, the submergence of land caused by water overflow, can lead to significant risk and damage to lives and property in Solano County. The policies and implementation programs proposed in this section outline measures to mitigate, prevent, and reduce flooding risks throughout the county.

Planning Context

Seasonal Flooding

In Solano County, a large portion of developed and undeveloped county lands are subject to flooding as a result of heavy seasonal rainfall, dam inundation, and canal or levee failure. A majority of these county flood-prone lands are specifically subject to inundation as a result of heavy rainfall and resulting stream overflows. **Figure HS-1** shows 100-year

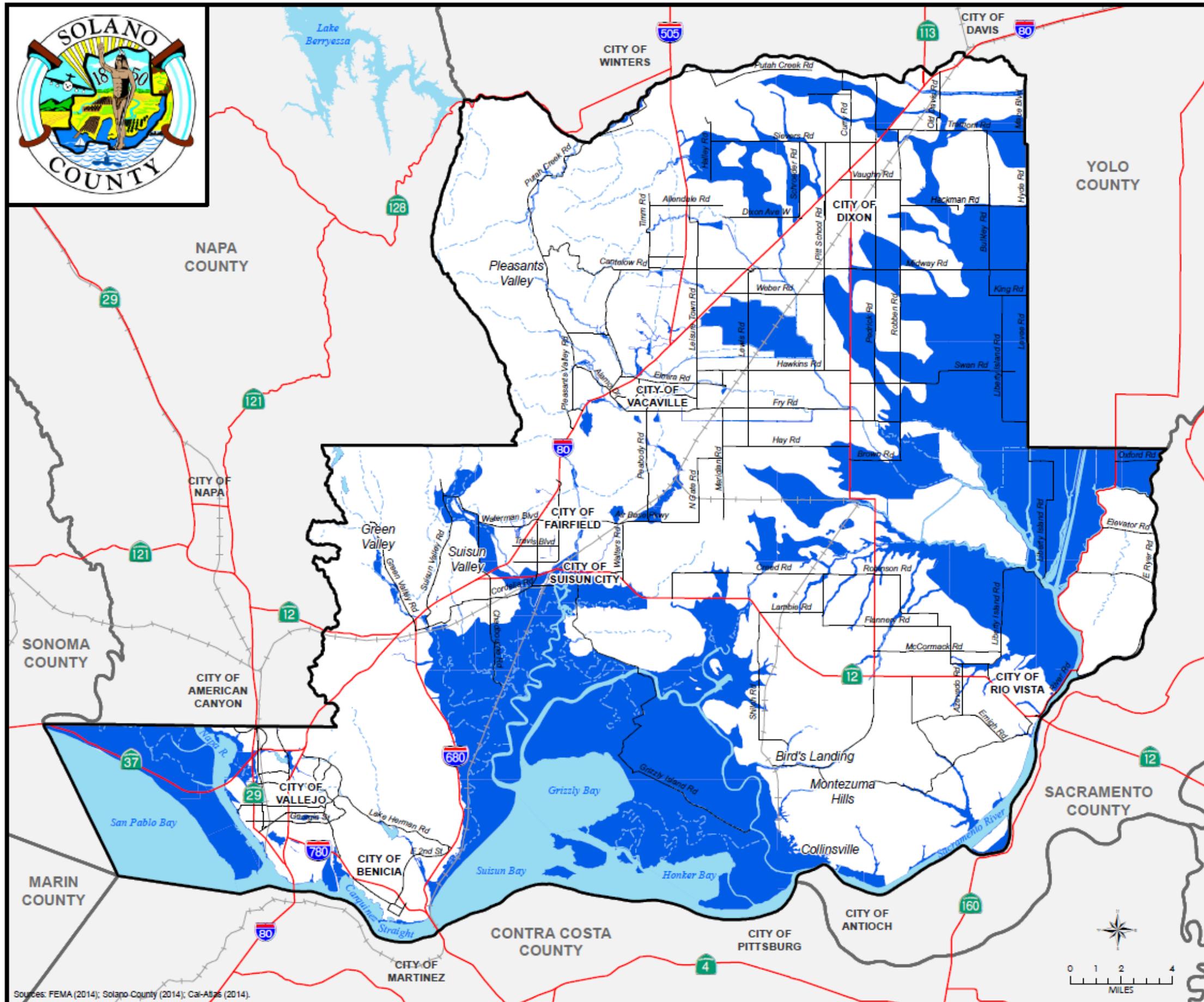
floodplain zones, which are estimated inundation areas based on a flood that has a 1 percent chance of occurring in any given year. These floodplain zones are defined by the Federal Emergency Management Agency. Heavy seasonal rainfall, which typically occurs between November and May, often results in stream overflows. A number of streams in the county have long histories of seasonal flooding, often resulting in significant damage. Flood risk is intensified in the lower stream reaches by the likelihood of coincident high tides and strong offshore winds during heavy rainfall.

Spreading urbanization is further aggravating the potential for stormwater flood damage in the county by reducing floodplain area available to absorb stormwater in low-lying areas and preventing natural absorption of stormwater in the higher land, upstream watersheds. Thus, unchecked urbanization is leading to increased rates and volumes of stormwater runoff in the county. Because of the varying conditions of watersheds in the county, each one should be individually addressed using a coordinated set of County policies that control watershed runoff and stream overflow to reduce flooding.

Agricultural land has long been used for valuable de facto flood protection. Farmers have historically allowed stormwater detention on their properties during storm events and have expressed a desire that the County recognize the positive contributions of farmland as a flood prevention and reduction measure.

Pursuant to Assembly Bill (AB) 162 (2007), the California Department of Water Resources (DWR) and Central Valley Flood Protection Board (formerly State Reclamation Board) adopted a Central Valley Flood Protection Plan (CVFPP) in 2012. AB 162 also established certain flood protection requirements for local land use decision-making based on the CVFPP. This law set a higher standard for flood protection for the Sacramento-San Joaquin Valley area, which covers the entire Delta region. It set an urban level of flood protection necessary to withstand a 1 in 200 chance of a flood occurring in any given year (200-year flood) for areas developed or planned to have a population of at least 10,000. DWR has developed 200-year floodplain maps for the Sacramento-San Joaquin Valley area, which includes a portion of eastern Solano County. The 200-year floodplain within the eastern portion of Solano County is shown in **Figure HS-2**. The area potentially affected by a 200-year flood event in Solano County is located in the Sacramento-San Joaquin Delta on unincorporated land designated for agricultural use, or within the City of Rio Vista Municipal Service Area (MSA).

As required by AB 162 Solano County has incorporated CVFPP measures into this Element of the General Plan, through inclusion of new 200-year flood, levee, and dam mapping, as well as more extensive flood risk analysis. The County will incorporate related measures into the Zoning Ordinance. Additionally, the County will continue to apply CVFPP information in the development and approval of specific projects and developments.



Solano County General Plan

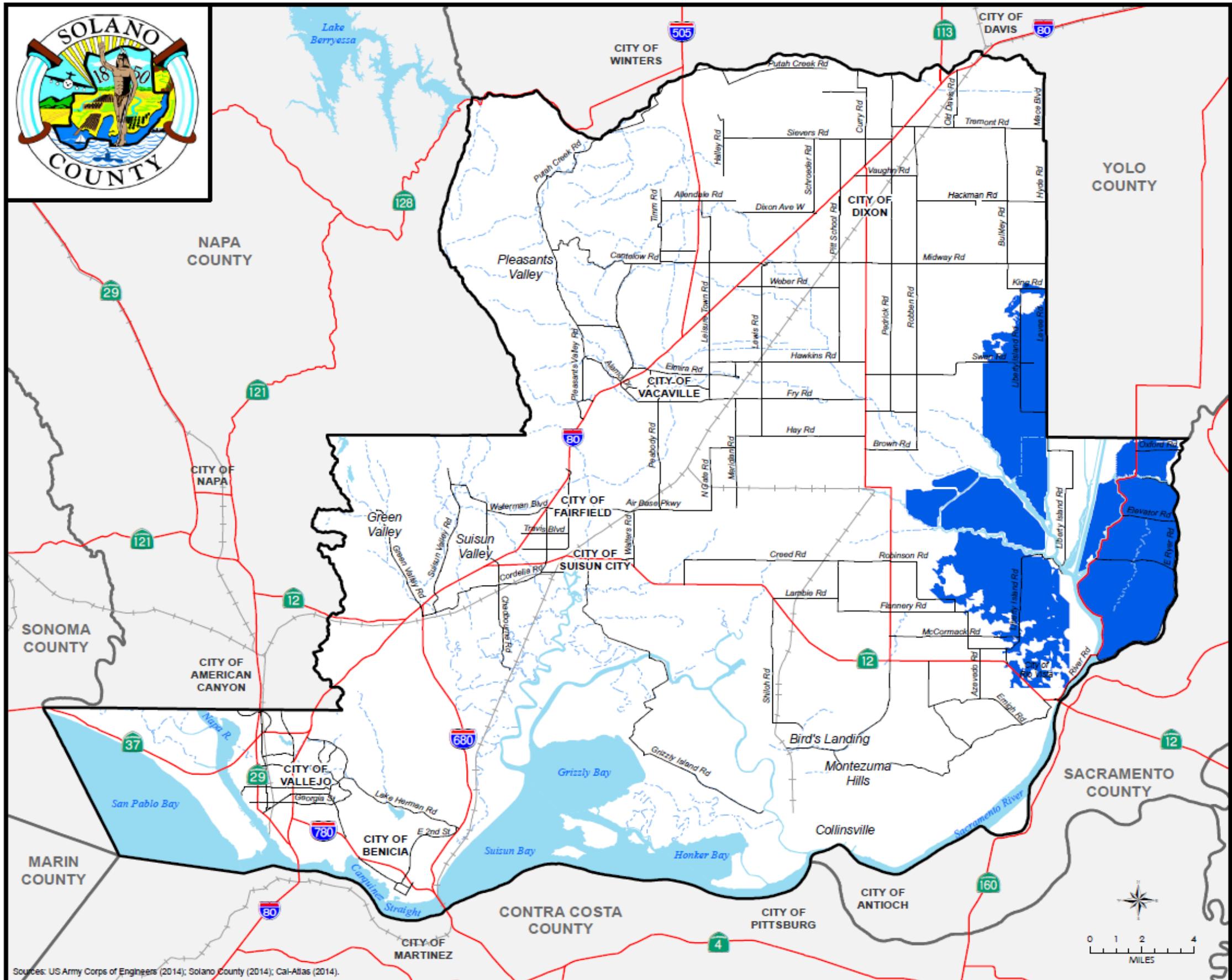
Figure HS-1

100-Year Floodplain Zone

Legend

- 100-Year Floodplain
- Roadway
- Highway
- Railroad
- - Streams and Creeks
- Major Water Features
- Adjacent Counties

"Planning for a Sustainable Solano County"



Solano County General Plan
Figure HS-2
200-Year Floodplain Zone

Legend

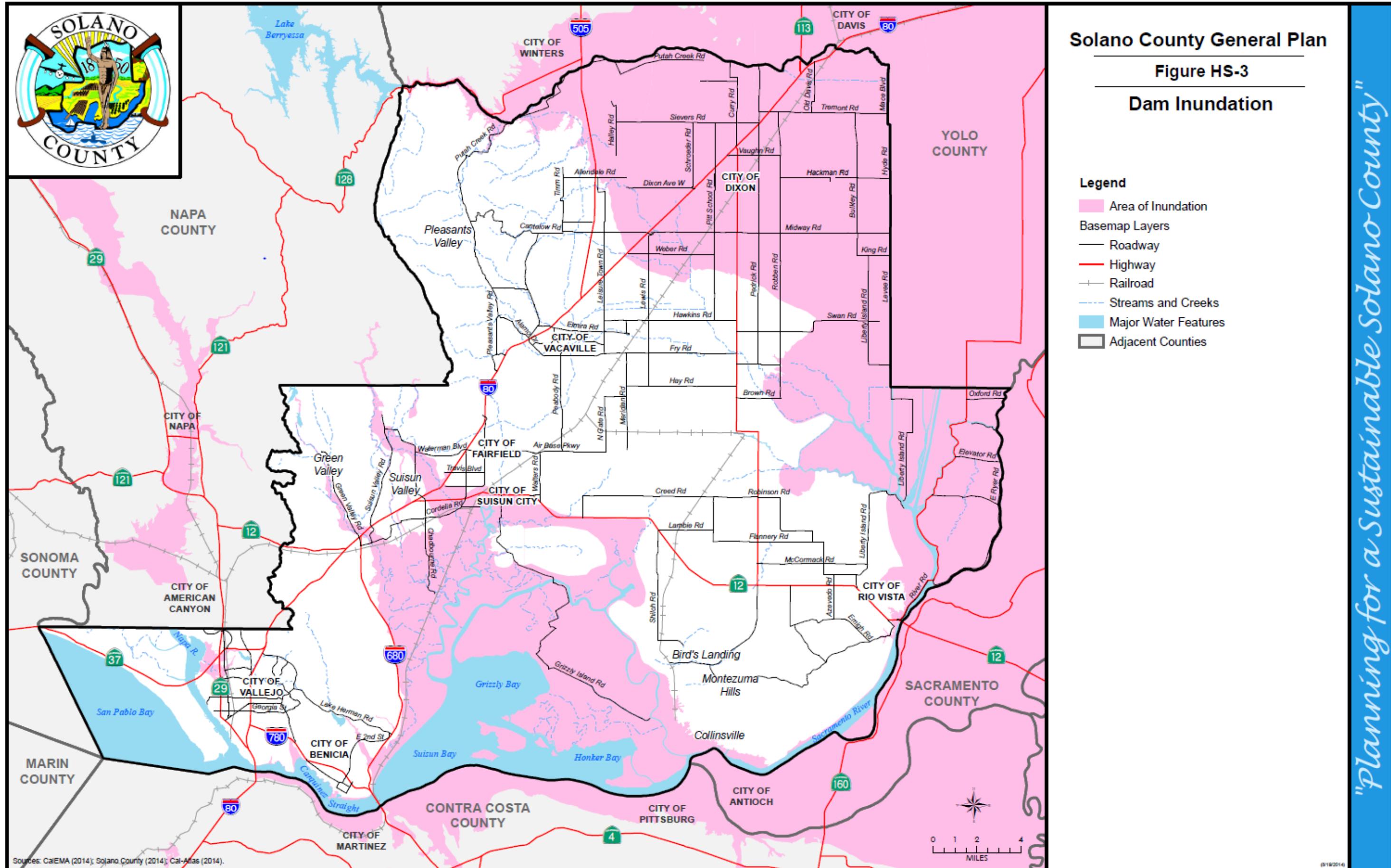
- 200-Year Floodplain
- Basemap Layers
- Roadway
- Highway
- Railroad
- - Streams and Creeks
- Major Water Features
- Adjacent Counties

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Dam Inundation

Dam inundation occurs when a dam is not structurally sound or is unable to withstand damages resulting from seismic activity. The degree and rapidity of dam failure depends on the dam's structural characteristics. **Figure HS-3** shows inundation impacts of dam failures, as prepared by the California Office of Emergency Services (also called CalEMA).

There are 18 regulation dams in Solano County, that meet the specifications under Water Code Sections 6002-6004 (25 feet in height above the streambed, or an impounding capacity of 50 acre-feet or more). Of these dams, the State of California Office of Emergency Services has identified 10 where dam inundation has the potential to cause human injury or loss of life. To reduce the likelihood of dam inundation, policies and programs are included in this section requiring an assessment of each dam's potential for earthquake-induced failure, evacuation times, inundation profiles (flood depth), and inclusion of project features that may reduce dam failure hazards.



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Canal or Levee Failure

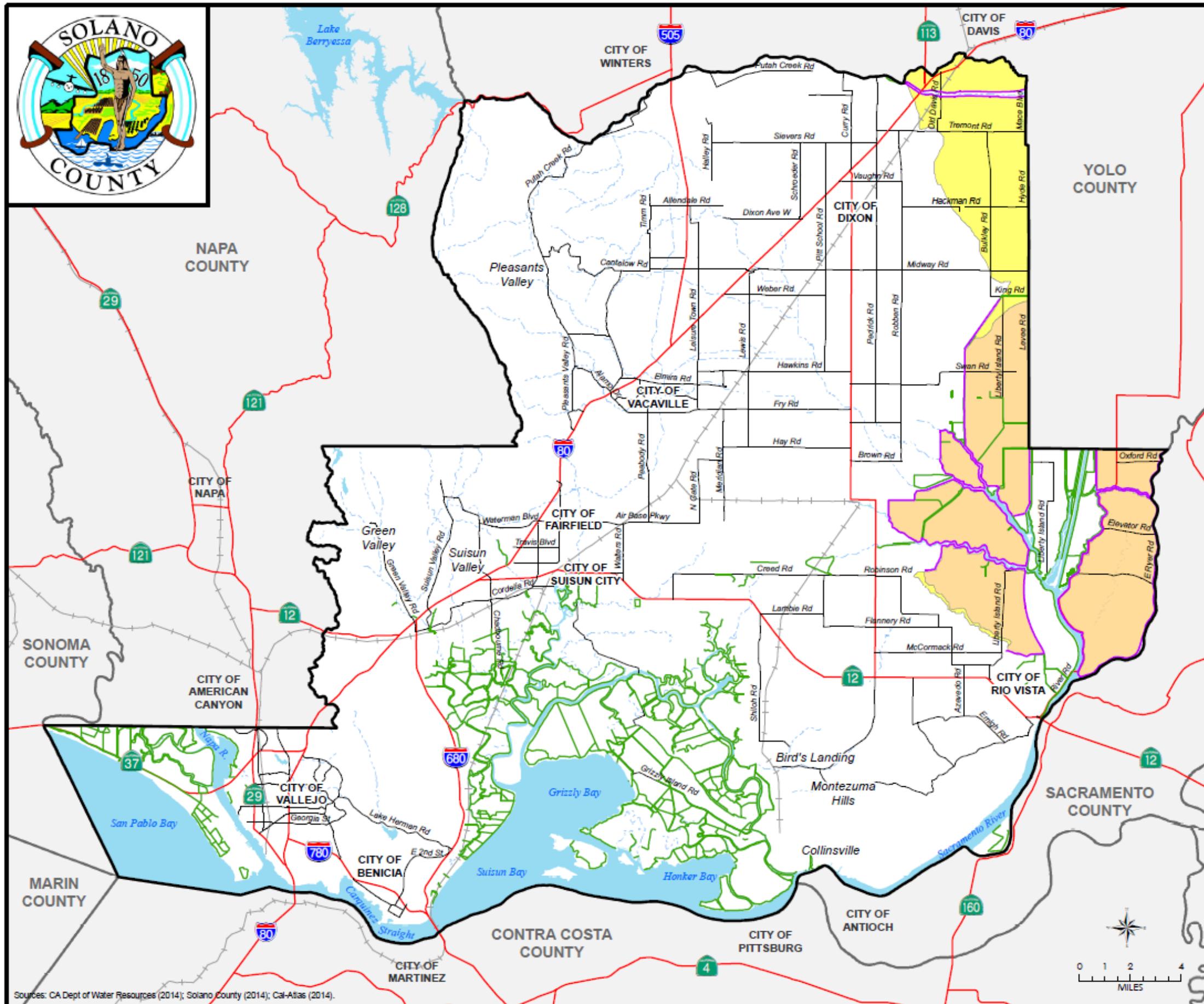
Canals or levees may fail because of earthquake-induced slumping, landslides, and liquefaction in Solano County. The existing levee system in some Solano County marshlands was initially constructed by hand labor, and later by dredging to hold back river floods and daily tides, to obtain additional lands for grazing and crop growing. Constant maintenance is necessary to hold these levees against the high tides and river floods that threaten reclaimed marsh lands. Because levees are vulnerable to peat oxidation as well as sand, silt, and peat erosion, new material is continually added to maintain them. Subsiding farmlands adjacent to levees may increase water pressure against levees, adding to the potential for levee failure. In addition, most levees are not maintained to any specified standard, which can increase the likelihood of failure and inundation.

Levee failures can be difficult to predict, since even inspected levees are prone to failure under certain conditions. DWR has, using the best available information, identified areas within the county where flood levels would be more than 3 feet deep if a project levee were to fail; these areas are known as Levee Flood Protection Zones (LFPZ). **Figure HS-4** identifies locations of LFPZs in Solano County. Most are located in the eastern portion of the county within the Sacramento-San Joaquin Delta. Figure HS-4 also identifies the location of project and non-project levees.

In addition to the identified LFPZs, potential failure of levees as a result of liquefaction constitutes a flood hazard in much of the southern half of Solano County. Some enclosed areas lie several feet below sea level and are subsiding at a rate of up to 3 inches per year. Most of these diked areas are currently used for agriculture, and some lie so far below sea level that it would be economically infeasible to drain them should they be flooded as a result of levee failure. Failure of levees protecting Collinsville could flood parts of that community, causing damage to residential areas. Roads in the Suisun Marsh and in the east county are constructed almost exclusively on levees. Thus, levee failures could also disrupt travel through these areas. These roads are primarily used by local farmers, but also serve recreational needs.

Two projects operated and maintained by the Solano County Water Agency (SCWA) use channels for flood control. Both projects include unlined earthen channels with some vegetation for slope reinforcement. The smaller of the two projects is the Ulatis Flood Control Project. This project is located in the Vacaville-Elmira drainage basin, and is designed to handle a 10-year flood event. The purpose of the Ulatis project is to protect agricultural land downstream of Vacaville. The bigger of the two projects is the Green Valley Flood Project, which is partially located in the unincorporated community of Cordelia and partially within the City of Fairfield. The Green Valley project consists of 6 miles of channel and is designed to handle a 40-year flood event.

SCWA has no future improvements planned for either project. However, as development in the watershed continues, SCWA must ensure capacity for additional runoff. SCWA requires the cities in Solano County to adequately mitigate the impacts of stormwater runoff from development projects. SCWA also monitors the channels at both sites to ensure adequate capacity exists to carry designated flows.



Solano County General Plan

Figure HS-4

Levee Flood Protection Zones

Legend

Levee Flood Protection Zones (LFPZ)

- Depth Unknown

- Estimated Depth Greater Than 3'

DWR Levee Category

- Project

- Non-Project

Basemap Layers

- Roadway

- Highway

- Railroad

- Streams and Creeks

- Major Water Features

- Adjacent Counties

"Planning for a Sustainable Solano County"

Climate Change

The California Climate Change Center, a research arm of the California Energy Commission, has found that climate change will result in new flooding concerns throughout California. Climate change-induced sea level rise is likely to create significant impacts in the San Francisco Bay and Delta. The 2007 projections from the International Panel on Climate Change estimate that sea level will increase by 7 to 23 inches by 2100. The San Francisco Bay Conservation and Development Commission (BCDC) and other state agencies are evaluating expected impacts using these projections. While uncertainty exists regarding the extent of sea level rise, there is consensus that it will increase the frequency, duration, and magnitude of flood events in the San Francisco Bay and Sacramento-San Joaquin Delta (Bay-Delta) area. Given a 1-foot rise in sea level, as predicted in low-end sea level rise projections, the occurrence of a 100-year storm surge-induced flood event would shift to once every 10 years. In other words, the frequency of a 100-year event could increase tenfold. Sea level rise and the associated increases in flood events would place greater strain on existing levee systems and will likely expand floodplains into unprotected areas of the county.

In addition to the pressure resulting from sea level rise, climate change will result in increased severity of winter storms, particularly in El Niño years. Such weather events will result in higher levels of seasonal flooding than those currently experienced. This too will strain levees and increase floodplain areas.

Related Plans, Programs, and Agencies

Solano County Water Agency Flood Hazard Warning System

The Solano County Water Agency Flood Hazard Warning System was created in 2006 to provide up-to-date information to the community and public agencies on potential flooding in Solano County.

Federal Emergency Management Agency

The Federal Emergency Management Agency is an agency whose mission is to reduce the loss of life and property from natural and human-made disasters through a comprehensive, risk-based emergency management system. One of their responsibilities is to maintain flood zone maps.

Cobey-Alquist Flood Plain Management Act

The Cobey-Alquist Flood Plain Management Act (California Water Code Section 8400 et seq.) found that land use regulations related to floodplain management are best developed at the local level. Local governments are asked to ensure no structures or other obstructions are in flood-prone areas that would impede the motion of flood waters. No specific provisions are in this act related to the General Plan.

California Department of Water Resources

DWR implements the California Water Code, including the Cobey-Alquist Flood Plain Management Act. DWR regulates activities in California's floodways, encourages preventative flood control maintenance, and operates some flood-control projects.

Assembly Bill 162 (2007)

This bill, in contrast to the regulations provided by the Cobey-Alquist Flood Plain Management Act, focuses on providing flood protection for California communities through requirements implemented by local general plans. It calls for flood-related provisions in the state-mandated Land Use, Conservation, and Safety elements of general plans. Solano County addresses these requirements in this Public Health and Safety chapter.

Central Valley Flood Protection Board and Plan

This board was the Reclamation Board. It was given a new name and charter by Senate Bill 17 (2007), including an expanded membership and expertise-based seats including disciplines such as engineering, hydrogeology and flood management. The Central Valley Flood Protection Board developed and adopted the CVFPP in 2012 and continues to oversee the plan's implementation. The CVFPP provides conceptual guidance to reduce the risk of flooding for about one million people in California and \$70 billion in infrastructure, homes, and businesses with a goal of providing 200-year flood protection to urban areas, and reducing flood risks to small communities and rural agricultural lands.

Policies

-
- HS.P-1: Prevent or correct upstream land use practices that contribute to increased rates of surface water runoff.
 - HS.P-2: Restore and maintain the natural functions of riparian corridors and water channels throughout the county to reduce flooding, convey stormwater flows, and improve water quality.
 - HS.P-3: Require new developments to incorporate devices capable of detaining the stormwater runoff caused by a 100-year storm event or to contribute to regional solutions to improve flood control, drainage, and water recharge.
 - HS.P-4: Encourage the use of stormwater detention that may also be used for groundwater recharge.
 - HS.P-5: Appropriately elevate and flood proof developments for human occupancy within the 100-year floodplain for the profile of a 100-year flood event.

- HS.P-6: Work with federal, state, and local agencies to improve flood control and drainage throughout the county.
- HS.P-7: Require new development proposals in dam, canal, or levee inundation areas to consider risk from failure of these facilities and to include mitigations to bring this risk to a reasonable level.
- HS.P-8: Work with responsible parties to ensure dams, levees, and canals throughout the county are properly maintained and/or improved.
- HS.P-9: Preserve open space and agricultural areas that are subject to natural flooding and are not designated for future urban growth; prohibit permanent structures in a designated floodway where such structures could increase risks to human life or restrict the carrying capacity of the floodway.
- HS.P-10: Ensure that flood management policies that minimize loss of life and property also balance with environmental health considerations of the floodplain and therefore do not cause further erosion, sedimentation, or water quality problems in the floodplain area.
- HS.P-11: Raise public awareness about flooding and flood risks.

Implementation Programs

Regulations

HS.I-1: Include appropriate CVFPP measures within the County's Zoning Ordinance update to be completed after adoption of the General Plan.

Related Policies: HS.P-3, HS.P-5, HS.P-6, HS.P-9

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Adopt Zoning Ordinance update with CVFPP measures by 2016.

HS.I-2: Revise the County Zoning Ordinance to:

- limit activities that contribute to increased rates of surface water runoff, such as overgrazing by livestock, clearing, and burning, which can reduce natural vegetative cover;

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- promote recreational, open space, and agricultural uses of upstream watershed areas, where appropriate;
- limit the construction of extensive impermeable surfaces and promote the use of permeable materials for surfaces such as driveways, streets, parking lots, and sidewalks;
- require development in upstream watershed areas to follow best management practices for stormwater management, including on-site detention and retention basins, appropriate landscaping, and minimal use of impervious surfaces; and
- designate resource areas for preservation, including agriculture, wetlands, floodplains, recharge areas, riparian zones, open space, and native habitats.

Related Policies: HS.P-1, HS.P-2, HS.P-3, HS.P-4, HS.P-9, HS.P-10

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: By 2018

Funding, Physical Improvements, and Capital Projects

HS.I-3: Find funding for and establish the appropriate procedures to properly maintain dams, canals, and levees in Solano County.

Related Policies: HS.P-8, TC.P-23

Agency/Department: Solano County Office of Emergency Services

Funding Source: State and federal agencies

Time Frame: Ongoing

HS.I-4: Require periodic stream maintenance by private property owners, and undertake regular stream maintenance by the appropriate public agencies.

Related Policies: HS.P-1, HS.P-2

Agency/Department: Department of Resource Management; Public Works; Solano County Water Agency

Funding Source: General Fund

Time Frame: Ongoing

HS.I-5: Continue to make regular flood control and drainage improvements as recommended by local agency plans, the U.S. Army Corps of Engineers, and the California Reclamation Board. These actions are independent of and in addition to the development review process.

Related Policies: HS.P-6, HS.P-8, TC.P-23

Agency/Department: Solano County Water Agency; Department of Resource Management; Public Works

Funding Source: Capital Improvement Program, state and federal agencies

Time Frame: Ongoing

Development Review

HS.I-6: During project review, require the use of stormwater management techniques in developed upstream watershed areas that protect low-lying areas from flooding. Incorporate appropriate measures into the development review process to mitigate flooding and prevent erosion in and around county ditches.

Related Policies: HS.P-1, HS.P-2, HS.P-3, HS.P-4, HS.P-9

Agency/Department: Department of Resource Management; Planning Services

Funding Source: Private

Time Frame: Ongoing

HS.I-7: In review of new development projects, require disclosure of risk where proposed development would occur in flood risk areas. This disclosure may include notifying new residents in these areas and encouraging purchase of appropriate insurance.

Related Policies: HS.P-3, HS.P-5, HS.P-7, HS.P-9

Agency/Department: Department of Resource Management; Building and Safety Services

Funding Source: General Fund

Time Frame: Ongoing

HS.I-8: Work with the Solano County Water Agency (or successor agency) to review existing developments contributing to increased runoff and to reduce runoff wherever possible.

Related Policies: HS.P-1, HS.P-6

Agency/Department: Department of Resource Management; Building and Safety Services

Funding Source: General Fund, Development fees

Time Frame: Ongoing

HS.I-9: During project review, encourage the use of landscaping practices and plants that will reduce demand on water, retain runoff, decrease flooding, and recharge groundwater.

Related Policies: HS.P-1, HS.P-3, HS.P-4, HS.P-10

Agency/Department: Department of Resource Management; Planning Services

Funding Source: General Fund, development fees

Time Frame: Ongoing

HS.I-10: Where new development for human occupancy is proposed within dam, canal, or levee inundation areas, require the applicant to prepare a report describing the results of an inspection of the dam, canal, or levee by a state-registered civil engineer, including the reliability of the facility during a 100-year flood, potential for failure during seismic shaking, likely inundation area, and predicted evacuation times. The report should also include any necessary dam, levee, or canal improvements to protect life and property in the proposed development.

Related Policy: HS.P-7

Agency/Department: Department of Resource Management; Building and Safety Services

Funding Source: Development fees

Time Frame: Ongoing

HS.I-11: Increase the use of stormwater detention as a possible source of groundwater recharge as

appropriate and only when increased retention does not increase groundwater levels to a point at which it increases the potential risk of liquefaction.

Related Policies: HS.P-4, HS.P-10, PF.P-35

Agency/Department: Solano County Water Agency

Funding Source: Development fees

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach and Education

HS.I-12: Work with the Solano County Water Agency to create a countywide comprehensive flood management plan.

Related Policies: HS.P-6, HS.P-8, PF.P-35

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

HS.I-13: Continue to use the Solano County Water Agency Flood Hazard Warning System, which provides information regarding potential flooding risks.

Related Policy: HS.P-11

Agency/Department: Solano County Water Agency

Funding Source: General Fund

Time Frame: Ongoing

HS.I-14: Work with the Solano County Water Agency (or successor agency) in preparing a hydrological analysis of uplands, identifying the different watersheds that drain into the county, establishing flood-related objectives and priorities on a study area basis, and translating those into a coordinated series of flood-preventive measures for each watershed.

Related Policies: HS.P-1, HS.P-7, HS.P-10

Agency/Department: Department of Resource Management; Planning Services

Funding Source: General Fund

Time Frame: Ongoing

HS.I-15: Conduct an annual review of the 100-year and 200-year floodplain maps shown in **Figures HS-1 and HS-2**, as well as those available from state and federal agencies such as the Federal Emergency Management Agency and the Department of Water Resources to ensure that changes are noted and corresponding portions of this General Plan are revised.

Related Policies: HS.P-5, HS.P-6, HS.P-7

Agency/Department: Department of Resource Management; Planning Services, Public Works

Funding Source: General Fund

Time Frame: Annual

Coordination with Other Agencies and Organizations

HS.I-16: Investigate and pursue the creation of one regional or countywide agency for flood control purposes. Investigate consolidating flood control responsibilities for the entire county into the Solano County Water Agency.

Related Policies: HS.P-6, HS.P-7, HS.P-9, PF.P-36

Agency/Department: Department of Resource Management; Solano County Water Agency

Funding Source: General Fund

Time Frame: Ongoing

SEISMIC SAFETY AND LAND STABILITY

This section describes various actions that can be taken to prevent property damage and loss of life caused by earthquakes, landslides, and other geologic hazards. The County's strategy focuses on directing development away from known geologic hazards and ensuring high-quality construction in areas at risk. The more hazardous areas of the county do provide opportunity for low-intensity uses such as agriculture and recreation. These uses act to concentrate development in areas with lower risk.

Planning Context

The unique landscape found in Solano County provides the necessary conditions for earthquakes, landslides, and other geologic dangers. These events threaten people and property within geologic hazard zones, and their unpredictability is the driving force behind the proposed policies and implementation programs. The County hopes to safeguard development from the most hazardous areas by directing it toward more secure areas.

The county is crossed by a number of active faults, where past movement in the earth's surface has caused rock fractures. Fault traces occur when these fractures become visible on the surface (see **Figure HS-5**). Fault zones are the areas surrounding active faults, where future movement is likely to occur. It is in these zones where most earthquakes originate. Surface displacement along a fault would cause serious structural damage to any overlying building, transportation facility, main utility line, and/or aqueduct. **Figure HS-6** shows the locations of active faults in Solano County, along with the areas most likely to experience significant damage from earthquake-related ground shaking. Seismic shaking is by far the single greatest cause of earthquake damage. The most common method to measure earthquakes is magnitude. Although the Richter scale is well-known as a measurement tool, most scientists now use an updated method. Magnitude is not a straight-line measurement, meaning that an increase of one in the measurement does not mean an increase of only one in an earthquake's energy. For instance, a magnitude 6.0 earthquake releases 32 times more energy than a magnitude 5.0 and nearly 1,000 times more energy than a 4.0. The measurement is for the amount of energy released and doesn't mean the ground shakes a thousand times harder in a 6.0 than a 4.0, because the energy is released over a much larger area.

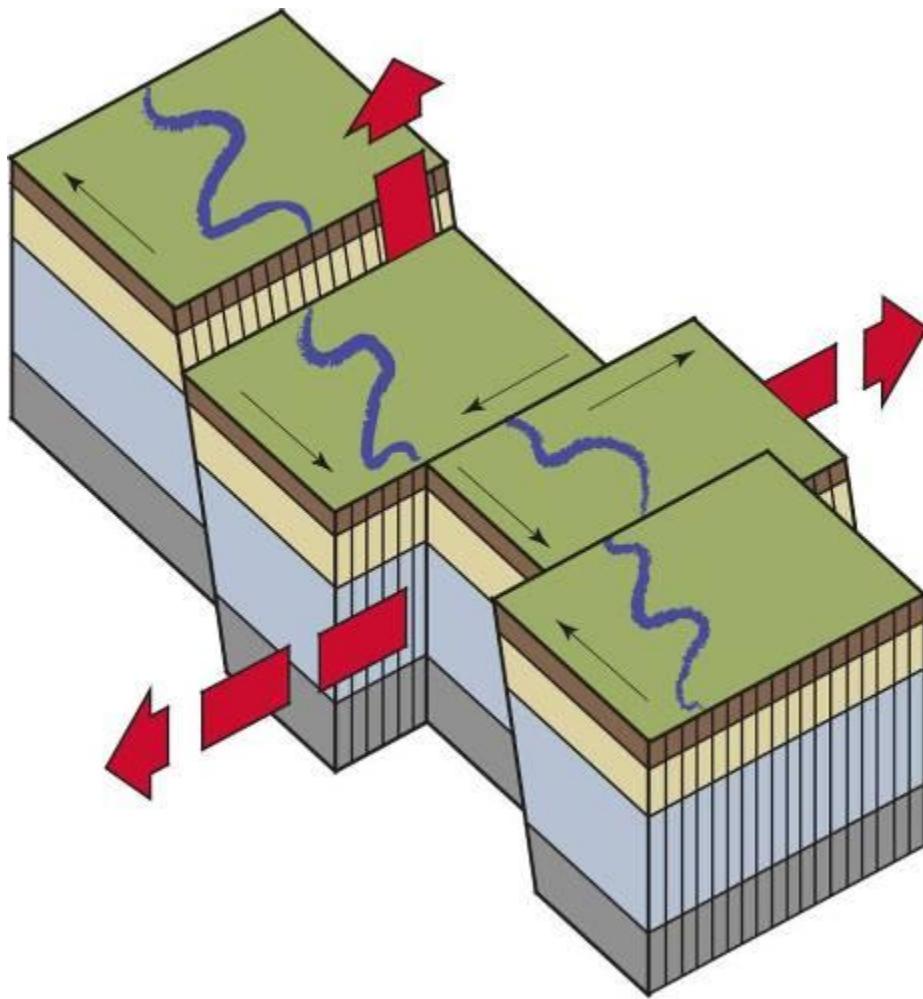


Figure HS-5
Fault Diagram

Upland areas of the county are susceptible to landslides, land slips, mudflows, and debris flows. Triggered by an earthquake, heavy rainfall, or changes in ground conditions caused by development activity, these events can send large volumes of land cascading down hillsides, destroying property along the way. **Figure HS-7** shows that the steepest slopes are found in the southeast and western portions of the county, suggesting a greater susceptibility to landslides and related hazards. Land stability has been analyzed and mapped for a portion of the county by the state Department of Conservation as shown in **Figure HS-8**. Areas 3 and 4 present areas of greatest risks.

Secondary effects of earthquake ground shaking also threaten buildings and other structures. Liquefaction is a change from solid to liquid in certain saturated soils, as a result of ground shaking. This change can cause ground failure and damage to overlying structures. Recent County efforts aimed at recharging the water table have been successful, but produced the unforeseen consequence of increasing liquefaction

potential in the central and eastern portions of the county. Areas with high liquefaction potential are shown in **Figure HS-9**. Lurching is the horizontal movement of ground next to slope faces, particularly in areas underlain by loosely consolidated soils, such as creek banks.

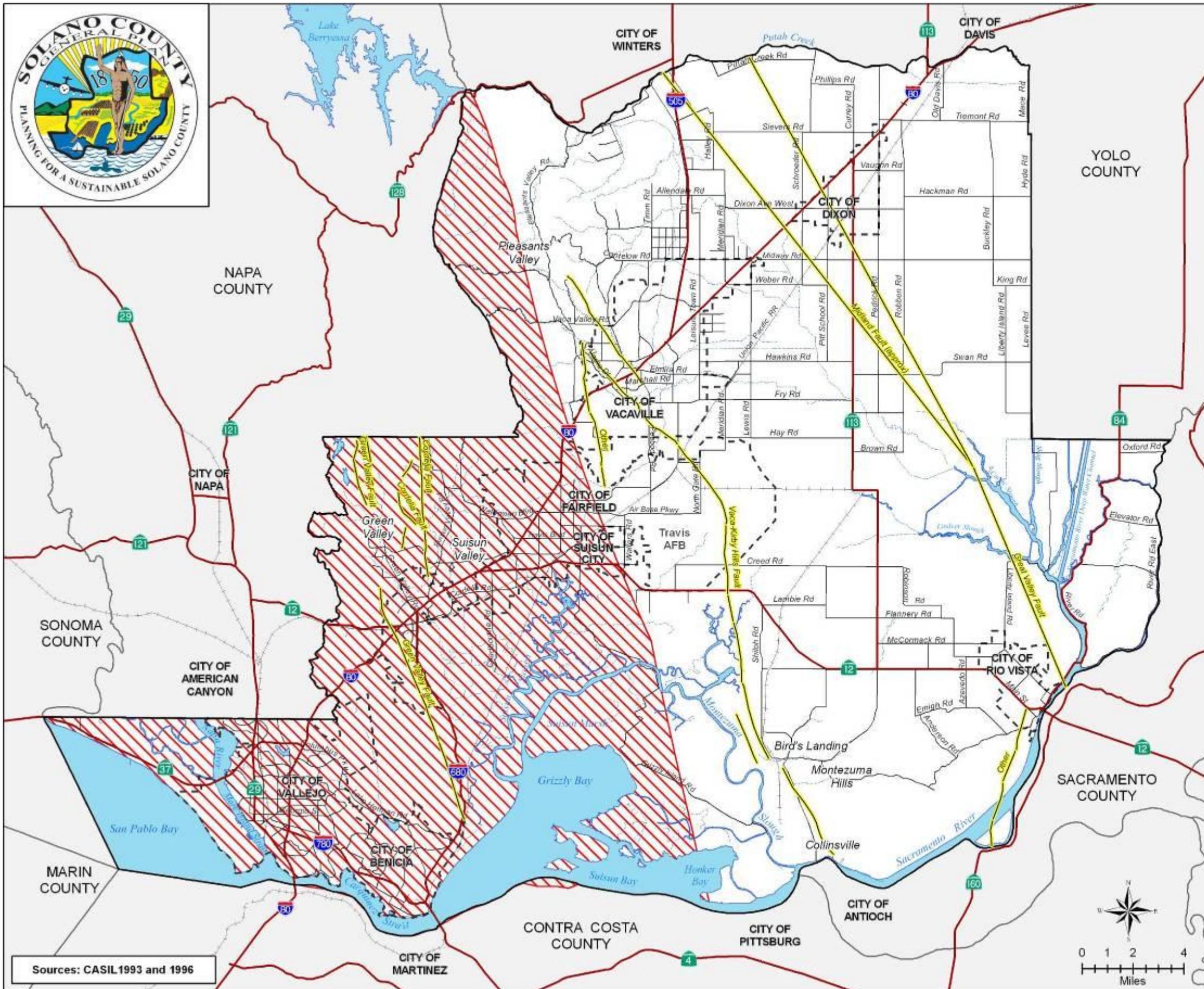
Coastal regions are threatened by tsunamis, which are powerful wave surges that can be caused by earthquakes and have the potential to flood lowland areas. By the time a tsunami wave reaches the Carquinez Strait, much of its energy would have already dissipated. The only areas of the county that would be subject to inundation tsunamis are the southwestern part of Mare Island and Island No. 1 located southwest of SR 37.

Nonseismic geologic hazards also exist within the county. Shrink-swell soils contain large amounts of clay that swell when wet and shrink when dry. These clays will swell despite heavy loads of large structures placed on them. Repetition of this shrink-swell cycle can cause building damage, including cracked foundations. **Figure HS-10** shows that a majority of the county is underlain by soils with a high shrink-swell potential. In most cases removing the top layer of soil and/or preconstruction design and engineering are enough to prevent the costly problems associated with these soils. Land settlement is a gradual lowering of the ground surface caused by compression of fine-textured deposits like clays and silts. Compression can be caused by removing water from the soil, through agricultural pumping for example, or by placing heavy loads on the soil. Many of the fine-textured bay mud deposits that exist in and around the Napa River Delta are susceptible to settlement and present a potential hazard for road construction and development in southern Solano County.

Related Plans, Programs, and Agencies

California Uniform Building Code

The State of California provides minimum standards for building design and construction through the California Building Standards Code (Title 24 of the California Code of Regulations). The California Building Code is based on the Uniform Building Code, which is used widely throughout the United States and has been modified for California conditions with numerous more-detailed and/or more-stringent requirements. The California Building Standards Commission is responsible for coordinating, managing, adopting, and approving building codes in the State of California. The California Building Standards Commission was established in 1953 by the California Building Standards Law.

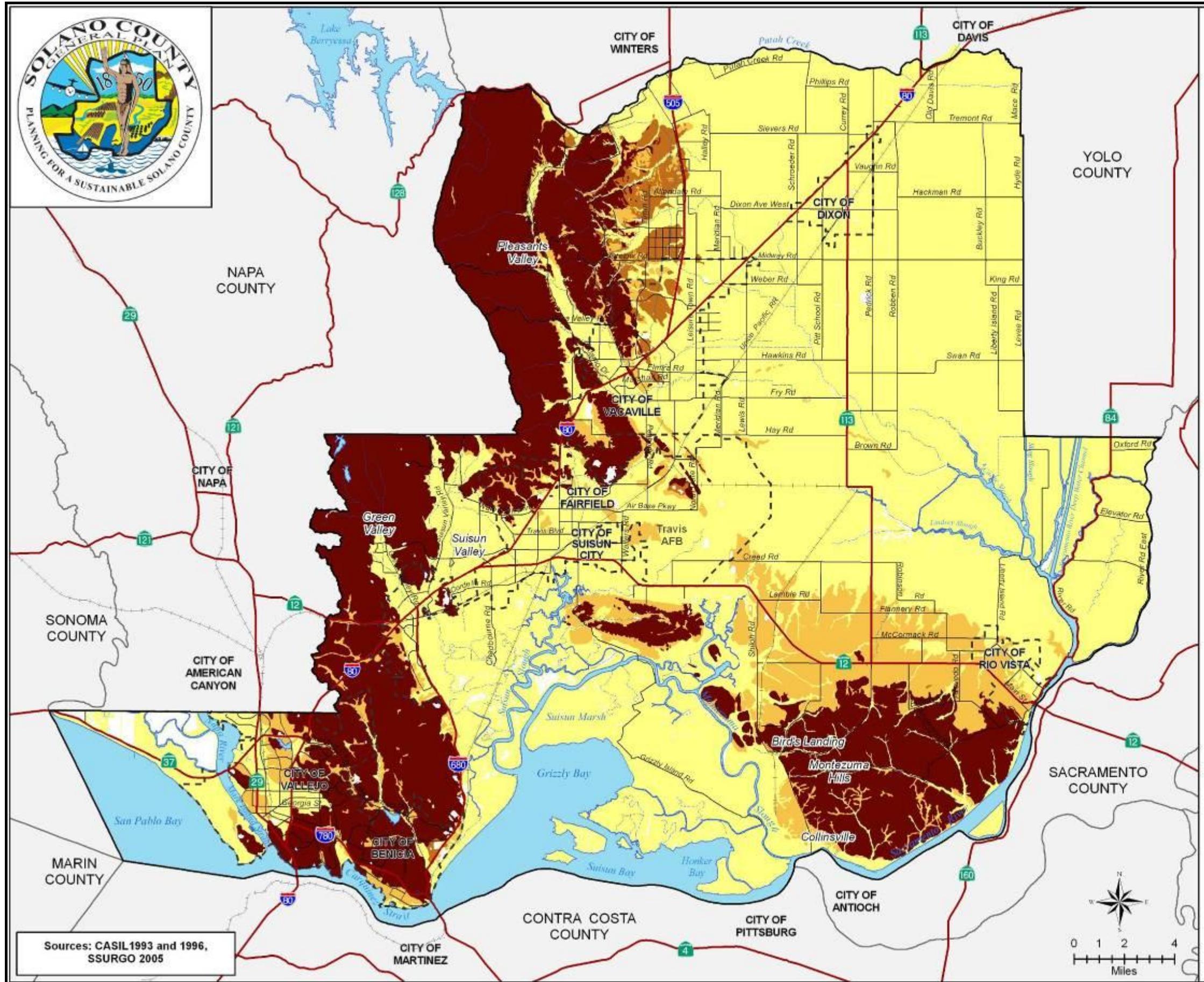


Solano County General Plan
Figure HS-36
Seismic Shaking Potential

Legend

- Fault Locations
- Highest Potential Earthquake Damage Area
- Basemap Layers
- Roadways
- Highways
- Railroads
- Streams and Creeks
- Major Water Features
- Municipal Service Areas
- Adjacent Counties

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Solano County General Plan

Figure HS-7

Slope Hazards

Legend

Slope by Percentage

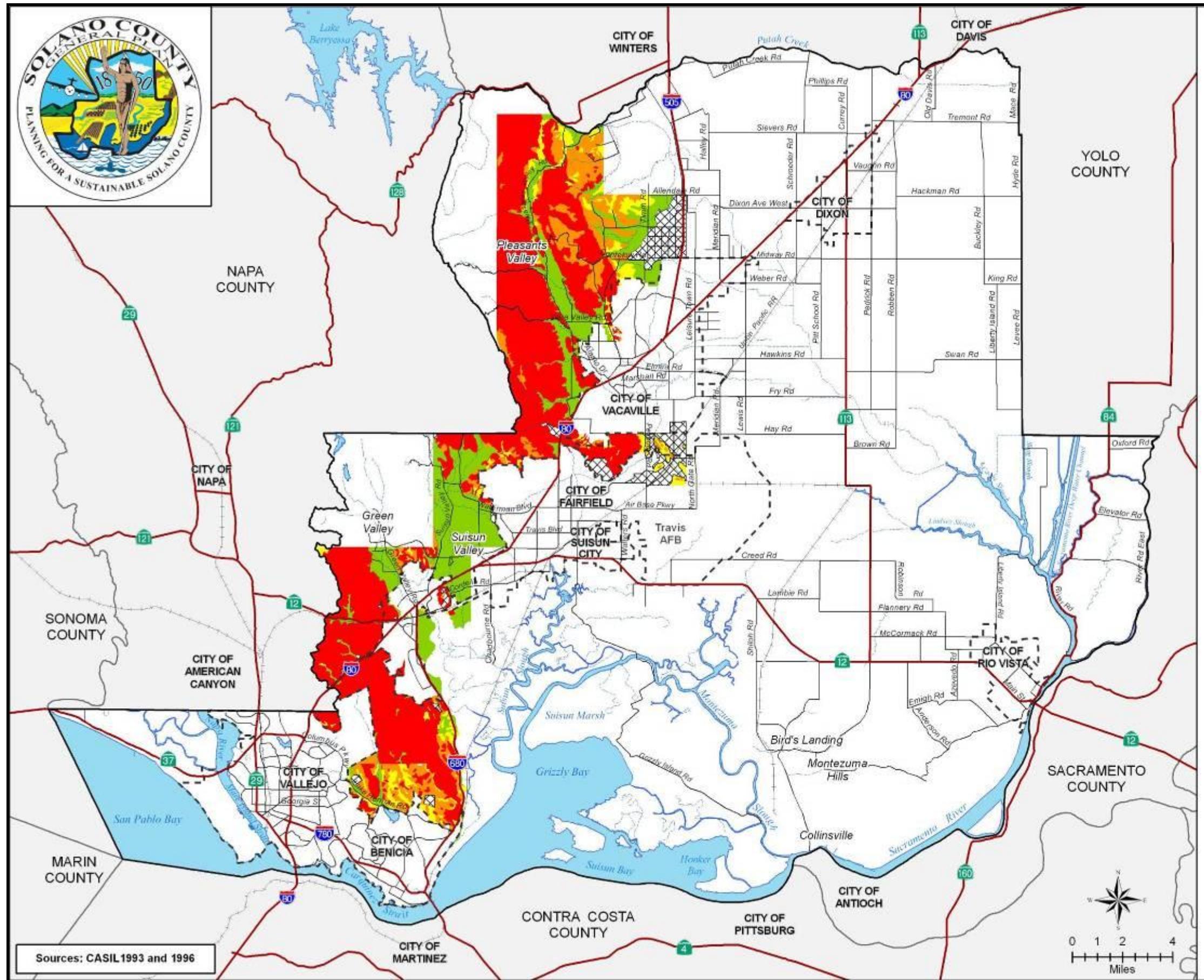
- A horizontal bar chart showing the distribution of responses across four categories. The categories are represented by colored bars: yellow for 'Less than 4%', orange for '4 - 7.9%', brown for '8 - 14.9%', and dark red for '15% and greater'.

Category	Percentage Range
Less than 4%	Less than 4%
4 - 7.9%	4 - 7.9%
8 - 14.9%	8 - 14.9%
15% and greater	15% and greater

Baseman Layers

- Roadways
 - Highways
 - Railroads
 - Streams and Creeks
 - Major Water Features
 - Municipal Service Areas
 - Adjacent Counties

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Solano County General Plan

Figure HS-5

Landslide Stability

Legend

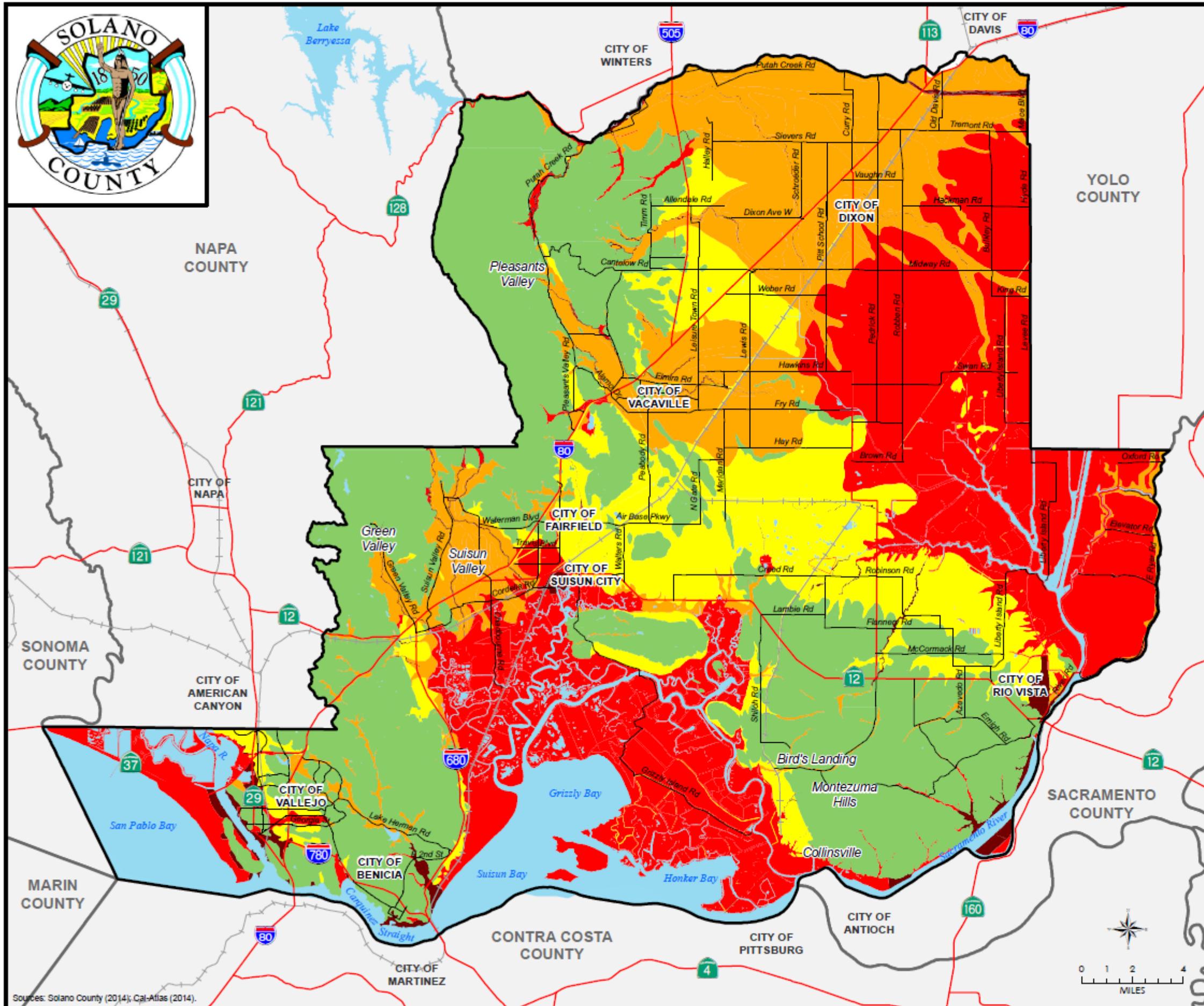
- Landslide Susceptibility

 - Least Susceptible Area (Area 1)
 - Marginally Susceptible Area (Area 2)
 - Generally Susceptible Area (Area 3)
 - Most Susceptible Area (Area 4)

Baseman | avers

- Roadways
 - Highways
 - + Railroads
 - Streams and Creeks
 -  Major Water Features
 -  Municipal Service Areas
 -  Adjacent Counties

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Solano County General Plan
Figure HS-9
Liquefaction Potential

Legend**Liquefaction Potential**

Very Low

Low

Medium

High

Very High

Area Not Mapped

Water

Basemap Layers

Roadway

Highway

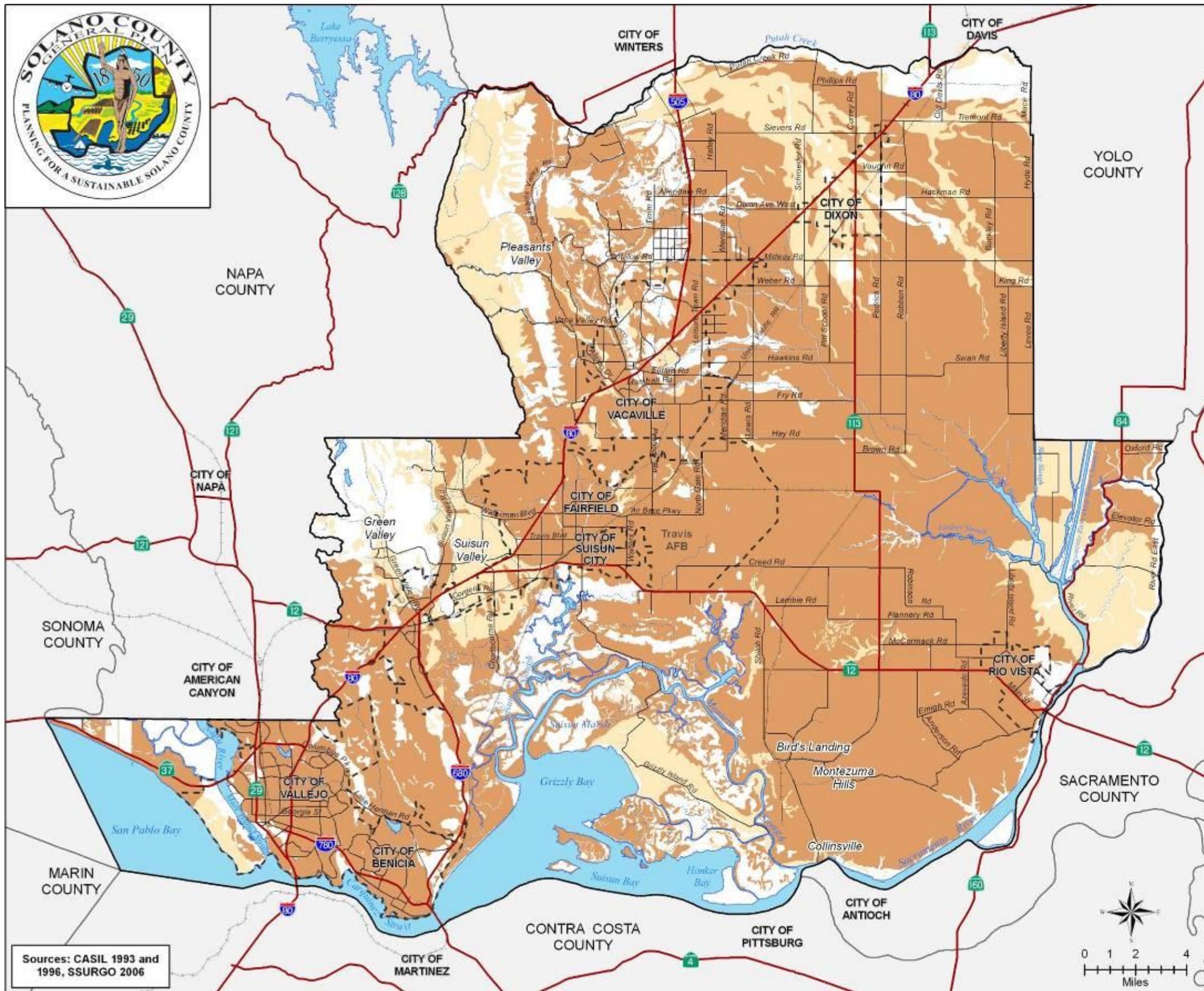
Railroad

Streams and Creeks

Major Water Features

Adjacent Counties

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Solano County General Plan

Figure HS-10

Shrink-Swell Potential

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Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act requires the State Geologist to identify earthquake fault zones along traces of both recently active and potentially active major faults. Cities and counties that contain such zones must inform the public regarding the location of these zones, which are usually one-quarter mile or less in width. The main purpose of the act is to prevent the construction of buildings used for human occupancy on the surface fault rupture.

Seismic Hazards Mapping Act

Pursuant to the Seismic Hazards Mapping Act, the State Geologist compiles maps identifying seismic hazard zones. Development in seismic hazard areas is subject to policies and criteria established by the California Geological Survey. This act addresses earthquake hazards related to non-surface fault ruptures, including liquefaction and seismically induced landslides, and states that cities and counties must require geotechnical reports defining and delineating any seismic hazard before approval of a project located in a seismic hazard zone.

The law also requires that the State Geologist establish regulatory zones (known as earthquake fault zones) around the surface traces of active faults and issue appropriate maps showing those zones. The maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling new or renewed construction. Local agencies must regulate most development projects within the zones. Projects subject to the act include all land divisions and most structures for human occupancy, except single-family wood-frame and steel-frame dwellings up to two stories that are not part of a development of four units or more. At their discretion, local agencies may be more restrictive than state law requirements.

Landslide Hazard Identification Program

The Landslide Hazard Identification Program requires the State Geologist to prepare maps of landslide hazards within urbanizing areas. According to Public Resources Code Section 2687(a), public agencies are encouraged to use these maps for land use planning and for decisions regarding building, grading, and development permits.

Policies

-
- | | |
|----------|--|
| HS.P-12: | Require new development proposals in moderate or high seismic hazard areas to consider risks caused by seismic activity and to include project features that minimize these risks. |
| HS.P-13: | Review and limit the location and intensity of development and placement of infrastructure in identified earthquake fault zones. |

- HS.P-14: Identify and minimize potential hazards to life and property caused by fault displacement and its impact on facilities that attract large numbers of people, are open to the general public, or provide essential community services and that are located within identified earthquake fault zones.
- HS.P-15: Reduce risk of failure and reduce potential effects of failure during seismic events through standards for the construction and placement of utilities, pipelines, or other public facilities located on or crossing active fault zones.
- HS.P-16: Require minimum setbacks for construction along creeks between the creek bank and structure, except for farm structures that are not dwellings or places of work, based on the susceptibility of the bank to lurching caused by seismic shaking.
- HS.P-17: Restrict the crossing of ground failure areas by new public and private transmission facilities, including power and water distribution lines, sewer lines, and gas and oil transmission lines.
- HS.P-18: Make information about soils with a high shrink-swell potential readily available. Require proper foundation designs in these areas.
- HS.P-19: Minimize development in areas with high landslide susceptibility.

Implementation Programs

Regulations

-
- HS.I-17: Revise the County Zoning Ordinance to do the following:
- Limit development occurring in geologic hazard areas, including active fault traces and fault zones, landslide susceptibility zones, and creek banks susceptible to lurching.
 - Prohibit structures in active fault trace areas. Per the Alquist-Priolo Earthquake Fault Zoning Act, structures for human occupancy must be set back at least 50 feet from active fault traces. Further limit development intended for human occupancy within 100 feet of active fault trace areas to one-story wood-frame structures.
 - Limit development within landslide areas 3 and 4 on **Figure HS-8** to agriculture, open space, or other nonurban uses. Adopt and implement hillside slope/density and land capacity ordinances within landslide area 2.

Related Policies: HS.P-13, HS.P-14, HS.P-16, HS.P-17, HS.P-19

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Amend by 2018

HS.I-18: Adopt and enforce the most current versions of the International Building Codes, as modified by the California Building Standards Commission.

Related Policy: HS.P-12

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Development Review

HS.I-19: Require geotechnical investigation and recommendations for buildings meant for public occupancy within geologic hazard areas. A state-certified Engineering Geologist shall produce a report examining development issues that considers:

- soil, slope, or other geologic hazard conditions found on site;
- potential off-site development impacts, such as increased runoff and/or slope instability; and
- requirements of any regulations concerning the hazard area.

Related Policies: HS.P-14, HS.P-15

Agency/Department: Department of Resource Management

Funding Source: Project Applicant

Time Frame: Ongoing

HS.I-20: Require geotechnical evaluation and recommendations before new development in moderate or higher-hazard areas. Such geotechnical evaluation shall analyze the potential hazards from:

- landslides
- liquefaction
- expansive soils
- steep slopes
- erosion
- subsidence
- Alquist-Priolo Earthquake Fault Zones or other identified fault zones
- tsunamis
- seiches

Require new development to incorporate project features that avoid or minimize the identified hazards. Costs related to providing or confirming required geotechnical reports will be borne by the applicant.

Related Policies: HS.P-12, HS.P-19

Agency/Department: Department of Resource Management

Funding Source: Project Applicant

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach and Education

HS.I-21: Require owners of all existing or proposed oil, gas, water, and sewer pipelines that cross active faults to file an operations plan describing the probable effects of pipeline failure at the fault and the various emergency facilities and procedures that exist to ensure that failure does not threaten public safety.

Related Policies: HS.P-15, HS.P-17

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

HS.I-22: Provide current data to the public regarding geologic hazards. Coordinate with cities to gather and periodically assess new geologic data including fault zone activity, landslide activity, and distribution of shrink-swell soils.

Related Policy: HS.P-13

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

HS.I-23: Develop a geologic constraints and hazards database to be maintained in the County geographic information system (GIS). The GIS shall be used to identify areas containing hazards and constraints that could potentially affect the type or level of development allowed in these areas. Make these data available to the public. Information maintained as part of the database may include:

- active faults
- relative seismic shaking hazards
- relative landslide susceptibility
- relative earthquake induced liquefaction susceptibility
- steep-slope constraints
- moderate and high-erosion hazards
- soils with high clay content indicating shrink-swell potential
- agricultural soils and/or bay mud subject to high water levels
- extreme, very high, and high wildfire risk using the Wildland Fire Hazard Areas map provided by the California Department of Forestry and Fire Protection

Related Policies: HS.P-12, HS.P-13, HS.P-14, HS.P-15, HS.P-16, HS.P-17, HS.P-18, HS.P-19, HS.P-20, HS.P-21, HS.P-22

Agency/Department: Department of Information Technology

Funding Source: General Fund

Time Frame: Ongoing

FIRE SAFETY

Planning Context

This section describes a variety of actions that can be taken to prevent property damage and loss of life caused by wildfires. The County's wildfire planning and prevention strategy focuses on techniques that reduce wildfire potential, support firefighting in rural areas, and ensure use of fire-safe building methods by:



Fire trucks at the Valley Station in Suisun Valley are ready to be deployed.

- directing non-farm-related development toward areas with low fire risk;
- working with fire districts during development review and enforcing fire-safe site and building design standards;
- promoting wildfire prevention measures such as grazing, disking, or plowing of agricultural lands; and
- requiring adequate on-site water supply for buildings lacking access to public water.

The County's fire safety policies and implementation programs were created to support the County's vision; specifically the desire to develop in a way that supports the needs of both humans and the environment. While promoting natural fire ecology is good for the environment, the damage it may cause can have devastating effects on people and property. The County seeks to find a sustainable balance between these outcomes by directing development away from known fire hazard areas and buffering the effects of a wildfire away from developed areas.

Potential Wildfire Areas

Solano County is threatened by both urban and rural fires with the potential to cause property damage, injury, and loss of life. Wildfires pose the greatest danger in the unincorporated county area. Topography, weather, and native vegetation provide the ingredients for destructive fires that can spread rapidly. In California, development activities within hazard areas have worsened the problem by placing people into hazard areas, disrupting natural fire processes and allowing buildup of flammable brush and vegetation. Such development has also moved the urban-wildland interface (the area where human development meets undeveloped wildlands) closer to higher-risk wildfire hazard areas, increasing the number of people and buildings at risk (**Figure HS-11**). The rugged, rural terrain found in the western hills of the county makes firefighting all the more difficult.

The desire to live in remote areas has put people and their homes at risk of wildland fires, land slides, and other natural disasters.

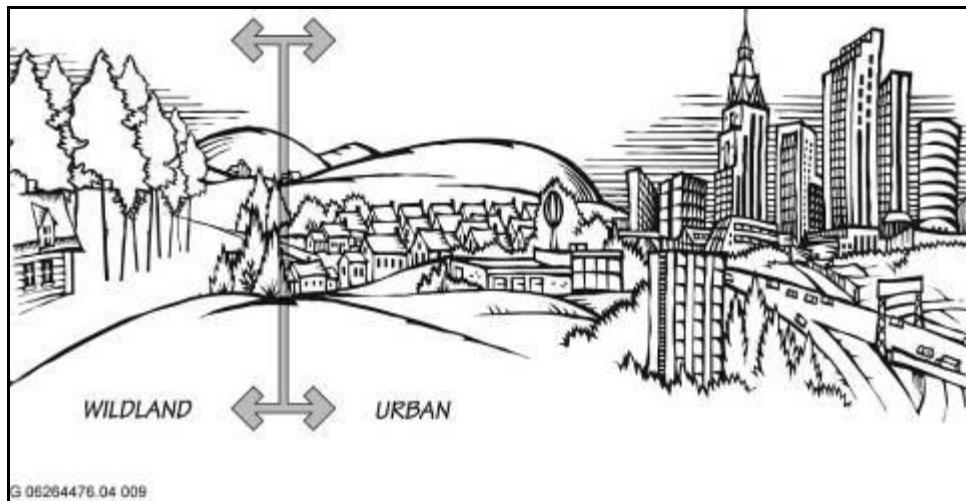
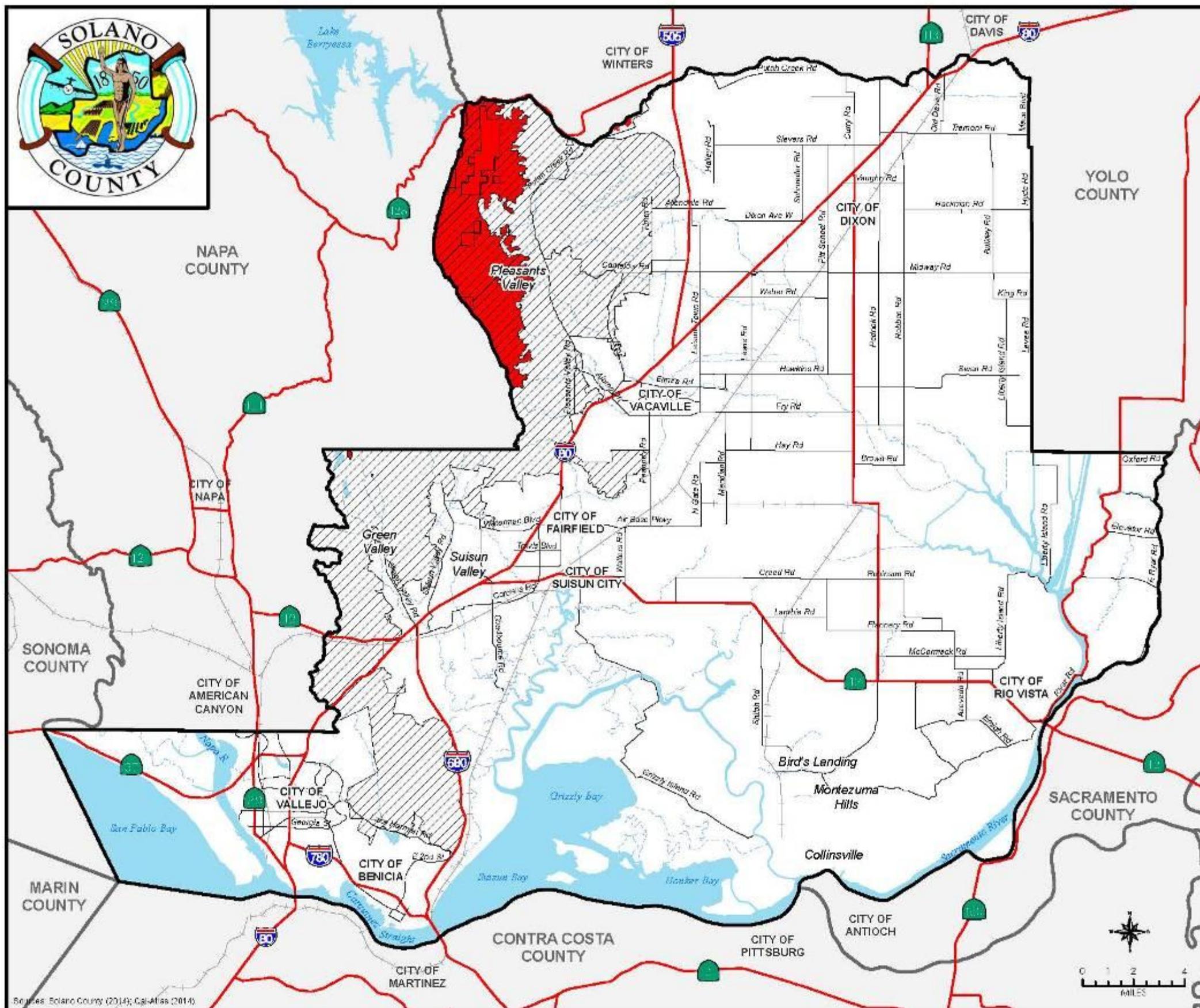


Figure HS-11
Urban-Wildland Interface

Areas at risk for extreme wildfires are designated by the California Department of Forestry and Fire Protection (CAL FIRE) as those lands where dense vegetation with severe burning potential prevails.

The highest current areas at risk for fires are found in western Solano County, in the foothills and mountainous watershed areas, and also in grasslands located throughout the county. As shown in Figure HS-12, portions of the Vaca Mountains, west of Pleasant Valley, are designated as Very High Fire Hazard Severity Zones. Before nearby lowlands were urbanized, vegetation in these mountainous areas were naturally maintained by periodic fire. As nearby lands were developed, natural wildfires were suppressed, resulting in the further buildup of fire-prone brush and woodlands. These efforts to suppress natural processes have resulted in larger, more damaging fires.

CAL FIRE maps identify wildfire hazards in state responsibility areas (SRA). Local jurisdictions do not have financial responsibility for wildland fire protection in SRAs. Figure HS-12 shows the location of SRAs. All very high fire hazard severity zones in Solano County are located in SRAs.



Solano County General Plan

Figure HS-12

Very High Fire Severity Zones and State Responsibility Areas

Legend

- State Responsibility Area (SRA)
- Very High Fire Hazard Severity Zones

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Figures HS-12 conveys two aspects of wildfire hazard: the ignition potential of high-use roads and urbanized areas and the burning potential of various types of vegetation. For example, grassland adjacent to a heavily traveled roadway has a high ignition potential because of the high probability and ease with which grass will ignite. A dense woodland canopy, on the other hand, has low ignition potential because of heavier fuels, but would burn with a much higher intensity and ultimately have a worse effect on the ecosystem. The worst fire hazard occurs where easily ignitable grass is growing with brush, which in turn serves as an extremely effective fuel link to the dense woodland canopy.

Water Pressure and Supply

Insufficient water pressure and supply also contribute to wildfire danger. Most of the higher-risk wildfire areas in the county are not served by public water. Fire districts serving these areas are typically equipped with tank trucks. Properties designated for residential use in areas without public water service are required to maintain sufficient on-site water storage and new development must show that it has sufficient water pressure for firefighting purposes.

Climate Change

Research conducted at the U.S. Department of Energy's Lawrence Berkeley National Laboratory indicates that climate change will increase the frequency and size of wildfires in California. Hotter, drier climates will promote increased accumulation of fire-prone vegetation, aided by prolonged drought, and stronger winds will continue to fan the flames spreading fires faster and farther than previously experienced. This will expand the size of the urban-wildland interface because more residential communities will be within reach of wildfire activity. An expanded urban-wildland interface will require increased resources, planning, and funding to maintain and defend.

Fire-Safe Planning

Several site design and planning methods can be employed to minimize dangers to life and property within wildfire hazard areas. Methods advocated by County policies and programs include buffering, creating fuel breaks, clustering, and fire-safe construction.

Buffering for fire safety refers to the removal of combustible vegetation around a building within a given distance, usually 30–50 feet (see **Figure HS-14**). This creates a fire defensible space, which can limit fire from spreading to nearby buildings and provides better access to the property for firefighters.

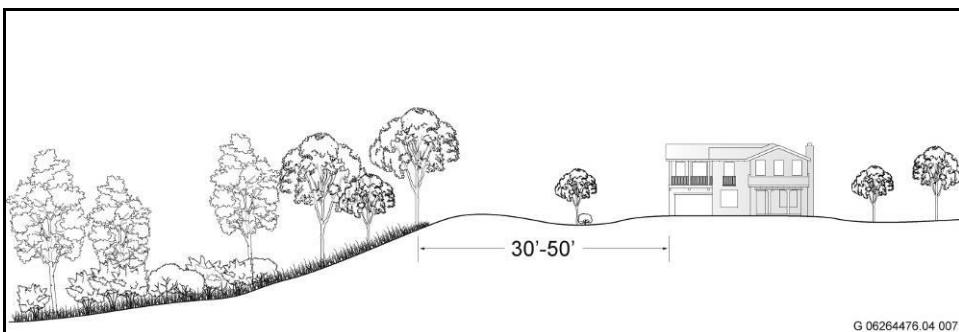
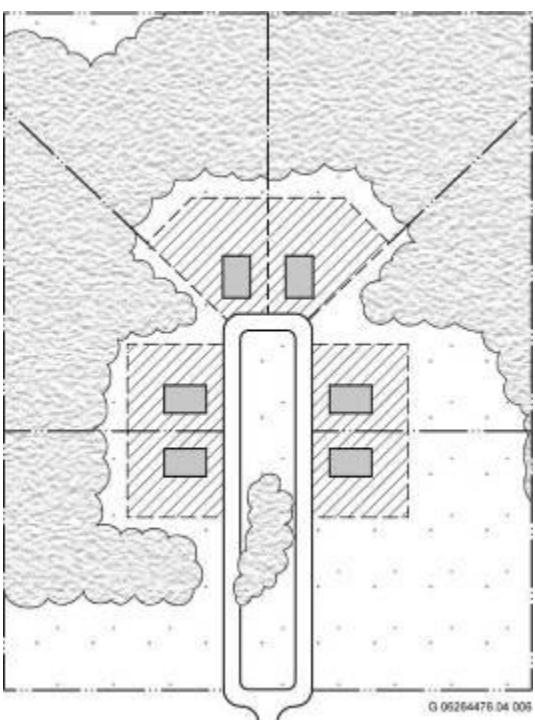


Figure HS-14
Buffering

Similarly, fuel breaks are large-scale buffers used to prevent fire from approaching communities or blocking roadway access for firefighting equipment. To create fuel breaks, small trees and light fuels within a 50-foot strip of land are removed. These fuels would otherwise allow fire to climb up to the treetops where firefighting is more difficult.

Removing vegetation within the 30–50' buffer provides fire defensible space for homeowners.

The same technique can be applied along roadways as fuel breaks to provide accessibility during wildfire events.



Clustering homes within a wildfire hazard area allows fire fighters to maximize their resources by concentrating in one area rather than moving from house to house.

Figure HS-15
Clustering

Fire-safe construction incorporates fire-resistant materials into various parts of a house including the roof, siding, vents, windows, and patios to minimize the risk of burning. Particular attention is given to locating propane and oil tanks in protected locations.

Related Plans, Programs, and Agencies

Local Fire Protection Agencies

Solano County does not have its own fire department. Several individual fire protection districts serve the unincorporated county area. Certain fire protection districts may consist of full- or part-time firefighters, but most firefighters in the unincorporated county are volunteers. Additional information and policies addressing fire protection agencies may be found in the Public Facilities and Services chapter of the General Plan.

California Department of Forestry and Fire Protection

CAL FIRE is a state agency responsible for protecting and maintaining privately owned wildland, providing emergency services, and responding to wildland fires throughout California. CAL FIRE provides fire protection to several unincorporated communities in Solano County including Green Valley, Vaca Valley, Lagoon Valley, and Pleasants Valley.

Policies

- HS.P-20: Require that structures be built in fire defensible spaces and minimize the construction of public facilities in areas of high or very high wildfire risk.
 - HS.P-21: Prohibit non-farm-related development and road construction for public use in areas of extreme wildfire risk.
 - HS.P-22: Require new developments in areas of high and very high wildfire risk to incorporate fire-safe building methods and site planning techniques into the development.
 - HS.P-23: Work with fire districts including the Sonoma-Lake-Napa Fire Unit, other agencies and property owners to ensure consistency with related plans including the Unit Fire Plan and the Solano County Emergency Operations Plan, and to

Disking agricultural fields helps to minimize the potential for wildfires.



coordinate efforts to prevent wildfires and grassfires through fire protection measures such as consolidation of efforts to abate fuel buildup, access to firefighting equipment, and provision of water service.

HS.P-24: Seek an appropriate balance between preventing and fighting fires and retaining the County's valuable visual and natural resources.

HS.P-25: Continue to encourage the consolidation of fire districts through the LAFCO process.

Implementation Programs

Regulations

HS.I-24: Update the Zoning Ordinance to limit development in areas of extreme, very high, and high wildfire risk.

Development within the extreme risk area will be limited to farm-related development served by private roads.

Land divisions within the very high and high risk areas will be restricted, unless the availability of adequate water supply can be demonstrated and guaranteed; more than one access point for firefighting equipment can be provided; defensible space is permanently maintained around any buildings; and, fire-resistant materials are used in construction.

Related Policies: HS.P-20, HS.P-21, HS.P-22

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Amend by 2018

Funding, Physical Improvements, and Capital Projects

HS.I-25: Collaborate with fire districts to establish funding mechanisms, including impact fees to offset fire protection costs for new developments in areas of high wildfire risk.

Related Policies: HS.P-20, HS.P-22, HS.P-23

Agency/Department: Fire Protection Districts; Department of Resource Management

Funding Source: May include special assessments, mitigation fees

Time Frame: Ongoing

Development Review

HS.I-26:	Work with fire districts to ensure that new development is built to support effective firefighting. Continue to seek fire district input on new development projects and ensure that such projects incorporate fire-safe planning and building measures. Such measures may include clustering housing, buffering properties, creating defensible space around individual units, using fire-resistant building materials, installing sprinkler systems, and providing adequate on-site water supplies.
Related Policies:	HS.P-20, HS.P-22, HS.P-23, HS.P-24
Agency/Department:	Fire Protection Districts; Department of Resource Management
Funding Source:	Project Applicant
Time Frame:	Ongoing
HS.I-27:	Ensure access for firefighting equipment in rural areas by clustering residential units that are located in areas of high fire risk and maintaining emergency access routes. These routes are designated as part of an emergency preparedness plan maintained under HS.I-37 in the Disaster Preparedness section.
Related Policy:	HS.P-22
Agency/Department:	Department of Resource Management; Fire Protection Districts; Office of Emergency Services
Funding Source:	General Fund
Time Frame:	Ongoing

Ongoing Planning Efforts, Public Outreach and Education

HS.I-28:	Identify areas of overlap between important visual and natural resources and fire hazard areas. The County will work with federal and state agencies and local fire districts to develop management plans for these lands that protect these resources while still allowing for appropriate fire maintenance.
Related Policy:	HS.P-24
Agency/Department:	Department of Resource Management; Fire Protection Districts

P u b l i c H e a l t h a n d S a f e t y C h a p t e r

Funding Source: General Fund

Time Frame: Ongoing

HS.I-29 When funding becomes available, develop a Wildfire Protection Plan that:

- Identifies, maps, and assesses potential housing units at risk;
- Identifies mitigation strategies to reduce potential risks/vulnerabilities;
- Initiates local fire safety programs such as Firewise Community Programs;
- Establishes ordinances for fire safe development and building codes within the VHFHSZ; and
- Establishes development standards for fire safety within the SRA.

Related Policy: HS.P-20, HS.P-22, HS.P-24

Agency/Department: Department of Resource Management; Fire Protection Districts

Funding Source: Grant funding

Time Frame: Adopt by 2019

Coordination with Other Agencies and Organizations

HS.I-30: Create fire buffers along heavily traveled roads by promoting grazing, thinning, mowing, plowing, disking, or controlled burning of roadside grass. Coordinate with the California Department of Transportation to ensure that adequate fire buffers are established along state highways. Favor those methods that have the least impact on air quality, such as grazing.

Related Policies: HS.P-23, HS.P-24

Agency/Department: California Department of Transportation; Department of Resource Management

Funding Source: Caltrans, Road Fund

Time Frame: Ongoing

HS.I-31: Increase cooperative efforts among fire districts, public agencies, and landowners. The County will continue to collaborate with the U.S. Forest Service, CAL FIRE, fire departments of adjacent counties, city fire departments, fire districts, and property owners to prevent and manage wildland fires. Efforts may include monitoring regional fuel buildup, maintaining fuel breaks, sharing firefighting equipment, and providing necessary water supplies. The County will continue to encourage the consolidation of fire districts.

Related Policies: HS.P-23, HS.P-25

Agency/Department: Department of Resource Management; Fire Protection Districts; Solano Local Agency Formation Commission

Funding Source: General Fund; Fire District funds; Local Agency Formation Commission

Time Frame: Ongoing

HAZARDOUS MATERIALS

Planning Context

This section addresses actions that can be taken to prevent exposure to potentially dangerous materials during their use, storage, transportation, and disposal. Hazardous materials ranging from agricultural fertilizers and pesticides to household cleaning products are used extensively every day. Hazardous materials include corrosive, toxic, reactive, or flammable materials which can be found in our homes and businesses. These materials can be harmful to people, wildlife, and the environment. Within Solano County they can be found in a number of products and locations, including hazardous wastes, brownfield properties, and naturally occurring materials like asbestos, radon, and mercury.

Types of Hazardous Materials

Hazardous materials come from a variety of sources within the county. Some common categories are briefly discussed below to provide a framework for the policies and implementation programs proposed at the end of this section.

Hazardous waste includes household and industrial products that cannot be safely disposed of in the trash or poured down sinks or storm drains. This includes items such as used motor oil, batteries, solvents, poisons, chemicals, oil- and latex-based paints, and automotive fluids. Hazardous waste is subject to storage time limits, disposal requirements, and labeling requirements on containers. Most hazardous waste may be stored for only 90 days with exceptions made for businesses that generate small quantities under certain circumstances. Hazardous wastes used by businesses are reported in an annual inventory of hazardous materials required by the Solano County Hazardous Materials Management Plan.

Naturally occurring hazardous materials in Solano County such as asbestos, radon, and mercury are also found throughout California. Asbestos is a naturally occurring mineral composed of long, thin, fibrous crystals. It is often found in a type of rock located in Solano County; serpentine. It has been used often in building materials because of its resistance to heat, chemical, or electricity damage. Inhaling asbestos fibers may cause various health issues, including lung cancer. For this reason, Asbestos is being removed from building materials and studies are continuing to investigate the correlation between naturally occurring asbestos and health of nearby residents.

Mercury is a chemical element found in Solano County as a result of both natural processes and human activities. Natural sources of mercury include volcanoes, hot springs, and natural mercury deposits. Sources related to human activities include coal combustion and certain industrial and mining activities. Mines with mercury producing ore are located in the Sulfur Springs Mountain Range east of the City of Vallejo. Human exposure most often occurs through consumption of fish that has been exposed to methyl mercury.

Radon is a gas that forms during the decay of uranium that is naturally found in rock, water, and soil. It migrates to the surface through cracks or fractures in the earth's crust. Breathing air with elevated levels of radon gas may result in an increased risk of developing lung cancer. Radon hazards are generally low in Solano County, although some tests near Vacaville did have significant results.

The County will continue to keep informed of these hazardous materials and will inform and educate residents on how to avoid the risks associated with them. Other sources of hazardous material in Solano County include agricultural spraying, such as herbicides and pesticides, leaking underground storage tanks, and airports, specifically Travis Air Force Base.

Brownfields

Brownfields are properties that are contaminated, or thought to be contaminated. Many are located in urban areas and are underused because of perceived remediation costs and liability concerns. Redeveloping brownfield properties optimizes the use of existing infrastructure, saving tax dollars and protecting natural resources. It also preserves agricultural and green spaces by slowing their conversion to residential, commercial, and industrial uses. Solano County maintains a list of all of the approximately 500 brownfield sites located within the county and works with federal and state agencies to ensure their proper cleanup or maintenance.

Transportation of Hazardous and Toxic Materials

Land use hazards associated with the transport of hazardous cargo do exist in Solano County. A number of major, interstate transportation routes pass through the area and a wide range of hazardous cargo is regularly transported along these routes. Types of hazardous cargo regularly transported out of, into, and through Solano County by freeway or railroad include flammable liquids, corrosive materials, compressed and/or poisonous gases, explosives, and flammable solids.

Tanker trucks carry numerous types of hazardous materials on public roadways throughout Solano County.



spreading the effects of an accident over a much larger area.

Some potential exists for a highway or railway mishap that could cause hazardous cargo to spill, contaminating surrounding areas. If flammable liquids were to ignite, they could quickly spread fire and poisonous fumes that could cause human casualties and/or property damage. Spilled liquids could also drain into nearby streams or drainage facilities,

The County recognizes that the possibility of an accident involving hazardous cargoes is present, and has established policies and implementation programs to minimize the likelihood and extent of such accidents. Certain provisions included in the General Plan, primarily in

response to noise and air quality issues, will also have a secondary effect of protecting developed lands near freeways and railroad alignments from casualties or property damage caused by hazardous cargo accidents. These provisions generally include increased development setbacks and berm techniques.

Related Plans, Programs, and Agencies

Safe Drinking Water and Toxic Enforcement Act of 1986

The Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65), was enacted as a ballot initiative in November 1986. The proposition was intended by its authors to protect California citizens and the state's drinking water sources from chemicals known to cause cancer, birth defects, or other reproductive harm, and to inform citizens about exposures to such chemicals. The act requires the Governor to publish, at least annually, a list of chemicals known to the state to cause cancer or reproductive toxicity.

Oil Spill Contingency Plan

The Oil Spill Contingency Plan (California Government Code Section 8574.1) requires that regional and local planning agencies incorporate within their planning the state's effort to respond to marine oil spills, and ensure the effective and efficient use of regional and local resources in the areas of traffic and crowd control, firefighting, boating traffic control, radio and communications control, and provision of medical emergency services.

Toxic Release Contingency Plan

The Toxic Release Contingency Plan (California Government Code Section 8574.16) requires that regional and local planning agencies incorporate within their planning the state's effort to respond to emergency toxic releases, and ensure the effective and efficient use of regional and local resources in the areas of traffic and crowd control, firefighting, hazardous materials response and cleanup, radio and communications control, and provision of medical emergency services.

Hazardous Materials Release Response and Inventory Program

The Hazardous Materials Release Response and Inventory Program (California Health and Safety Code Sections 25500–25520) establishes business and area plans for the handling and release of hazardous materials. Basic information on the location, type, quantity, and the health risks of hazardous materials handled, used, stored, or disposed of in the state, which could be accidentally released into the environment, is tracked by the local Certified Unified Program Agency (CUPA) within each region for the use and awareness of hazardous materials responders, firefighters, emergency care providers, regulatory agencies and other interested persons.

California Occupational Safety and Health Administration Hazardous Substances Emergency Response Training

California Occupational Safety and Health Administration Hazardous Substances Emergency Response Training is required for all workers involved with the handling, disposal or emergency response to hazardous materials (Title 8, Section 5192). Various training levels are required depending on organizational level and responsibility level.

Hazardous Waste Management Plans

The Solano County Department of Environmental Management maintains hazardous materials management plans to address emergency response to incidents involving hazardous materials handled by a business over 55 gallons, 500 pounds or 200 cubic feet of gas. These plans include an inventory of hazardous materials which is updated annually.

The County also maintains the Hazardous Waste Management Plan (Tanner Plan) for the management of all hazardous wastes generated within the county and to address the siting of hazardous waste facilities for the disposal of those wastes. The County participates with the regional Hazardous Waste Management Facility Allocation Committee in addressing the Tanner Plan siting requirements. The Household Hazardous Waste Element of the County's Integrated Waste Management Plan addresses the safe collection, recycling, treatment and disposal of hazardous wastes generated by households in the county.

Certified Unified Program Agency

The Solano County Department of Resource Management is the CUPA for all cities and unincorporated areas within the county. The CUPA program was created to consolidate and make consistent the various environmental and emergency response regulations applicable within a jurisdiction to minimize the number of inspections and fees businesses must comply with. The Solano County CUPA:

- conducts the permitting and inspection of businesses that handle certain quantities of hazardous materials/waste;
- inspects businesses for compliance with the Hazardous Waste Control Act, in conjunction with the Hazardous Materials Business Plan Program;
- responds to complaints of illegal disposal of hazardous waste; and
- addresses emergency response to incidents involving hazardous materials through the Hazardous Materials Management Plans.

"planning for a Sustainable Solano County"

Policies

-
- HS.P-26: Minimize the risks associated with transporting, storing, and using hazardous materials through methods that include careful land use planning and coordination with appropriate federal, state, or County agencies.
- HS.P-27: Work to reduce the health risks associated with naturally occurring hazardous materials such as radon, asbestos, or mercury.
- HS.P-28: Encourage the use of programs and products by businesses that will result in a reduction of hazardous waste and materials.
- HS.P-29: Promote hazardous waste management strategies in this order of priority: source reduction, recycling and reuse, on-site treatment, off-site treatment, and residuals disposal.
- HS.P-30: Locate facilities for transfer, treatment, storage and disposal of hazardous wastes using the siting criteria described in the Hazardous Waste Management Plan. The facilities shall be developed and operated to ensure the protection of the environment and compatibility with surrounding land uses.
- HS.P-31: Encourage regional efforts to implement alternatives to land disposal of untreated hazardous wastes, and participate in inter-jurisdictional agreements that balance the economic efficiencies of siting facilities with the responsibility of each jurisdiction to manage its fair share of hazardous wastes generated within the region.

Implementation Programs

Regulations

-
- HS.I-32: Continue implementation of the provisions of the Tanner Plan and siting locations for new hazardous waste storage and transfer facilities through the Association of Bay Area Governments' Hazardous Waste Allocation Committee

Related Policies: HS.P-27, HS.P-29

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Development Review

HS.I-32: Follow recommended protocol from the California Department of Conservation, Geologic Survey, U.S. Occupational Safety and Health Administration, and other applicable agencies for reducing risks associated with naturally occurring hazardous materials with new development.

Related Policies: HS.P-27

Agency/Department: Department of Resource Management

Funding Source: Project Applicant

Time Frame: Ongoing

HS.I-34: Coordinate with the California Department of Transportation and railway operators to establish routes intended for hazardous material transportation. Limit future development of sensitive land uses (e.g., residential, schools, hospitals) along these corridors unless adequate buffers are provided. These buffers shall match those that are created under HS.I-63 in the Air Quality section.

Related Policies: HS.P-26, HS.P-30, HS.P-32

Agency/Department: Department of Resource Management

Funding Source: Project Applicant

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach and Education

HS.I-35: Continue to support public education programs regarding health risks associated with naturally occurring hazardous materials such as asbestos, radon, or mercury.

Related Policy: HS.P-27

Agency/Department: Department of Resource Management; Department of Health and Social Services

Funding Source: General Fund

Time Frame: Ongoing

HS.I-36: Continue implementation of the Certified Unified Program Agency program, identifying businesses that use, store, and/or transport hazardous materials

in the county. Review, revise, and continue permitting and inspection practices for these businesses. Provide fire departments in the county with a list of such businesses to encourage hazardous material training before an event occurs. Continue to monitor operations of businesses that handle regulated quantities of hazardous materials. Require compliance with measures aimed at reducing associated health and environmental risks.

Related Policies: HS.P-26, HS.P-28, HS.P-29, HS.P-30, HS.P-31

Agency/Department: Department of Resource Management

Funding Source: Permit Fees and Fees for Service

Time Frame: Ongoing

HS.I-37: Encourage and promote programs and processes that reduce use of hazardous materials through implementation of the Green Business Program. Provide incentives for businesses to support "green" practices that result in less hazardous waste and the mitigation of existing waste. Such incentives might include tax breaks for brownfield redevelopment or providing environmentally friendly cleaning products at a reduced rate.

Related Policies: HS.P-26, HS.P-28, HS.P-29, HS.P-30

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

DISASTER PREPAREDNESS

Planning Context

Disaster preparedness refers to coordinated efforts to respond to both natural and human-caused disasters. The Solano County Office of Emergency Services (OES) prepares disaster plans for the county and coordinates required emergency services and facilities from all agencies and levels of government to meet emergency and disaster needs. While this section and the Public Facilities and Services chapter overlap in some respects, the policies contained here are primarily related to disaster situations, whereas those in the Public Facilities and Services chapter address ongoing facility needs and service standards.

Related Plans, Programs, and Agencies

Solano County Office of Emergency Services

OES oversees the development, establishment, and maintenance of programs and procedures to protect lives and property of county residents from the effects of natural or human-caused disasters. Those disasters to which the County is subject and for which the office must train and properly respond include:

- floods;
- earthquakes;
- major fires;
- storms;
- radiological or hazardous material incidents;
- aircraft accidents;
- mass casualty incidents; and
- any other emergency-related function.

OES manages and coordinates disaster response, terrorism response, search and rescue missions, flood response, and other major emergencies within its sphere of influence. It works with City and County departments with fire suppression activities, evacuations, hazardous materials incidents, disaster exercises, planning, and use of resources through the SEMS/Incident Command System. Additionally, OES conducts emergency preparedness training and awareness presentations for citizens and various organizations so they better understand what they should do before, during, and after a disaster or major emergency.

Policies

HS.P-32:	Work to ensure the adequacy of disaster response and coordination in the county and the ability of individuals to survive disasters.
HS.P-33:	Plan and designate evacuation and aid routes. Work to create a comprehensive circulation system that is effective in allowing emergency access to and from all parts of the county and which provides alternative routes during unexpected events such as flooding, fires, or hazardous materials accidents that require evacuation.
HS.P-34:	Promote public education and awareness regarding what to do, where to go, and how to evacuate in the event of a

catastrophic disaster, such as wildfires, earthquakes, or toxic material spills.

- HS.P-35: Encourage full coordination and communication between federal, state, and local agencies regarding disaster planning and preparedness.
- HS.P-36: Encourage full cooperation with medical facilities, schools, local radio stations, nonprofit organizations, and the private sector in disaster planning and preparedness.
- HS.P-37: Ensure that populations requiring special assistance are included in disaster planning and preparedness.

Implementation Programs

Ongoing Planning Efforts, Public Outreach and Education

-
- HS.I-38: Maintain and update countywide emergency operations and response plans including information on evacuation routes, inter-agency cooperation, and other specific recommendations and strategies for emergency response. Coordinate with emergency service providers (e.g., hospitals, fire departments, police, emergency shelters), schools and radio stations to provide a network that facilitates a timely and efficient disaster response. Include specific preparation for populations requiring special assistance, including the elderly, the physically and mentally disabled, and non-English speaking populations.

The emergency response plans should also incorporate the requirements and programs for the Oil Spill Contingency Plan, the Toxic Release Contingency Plan, the Hazardous Materials Release Response and Inventory Program, and other Hazardous Materials Management Plans.

Related Policies: HS.P-26, HS.P-32, HS.P-33, HS.P-34, HS.P-35, HS.P-36, HS.P-37

Department/Agency: Office of Emergency Services

Funding Source: General Fund

Time Frame: Ongoing

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- HS.I-39: Regularly assess the resources needed to effectively respond to disaster situations. Ensure proper staffing levels at emergency response agencies and update equipment and training as necessary.

Continue to train relevant personnel using the California Occupational Safety and Health Administration Hazardous Substances Emergency Response Training. Develop the County's capability to handle mass shelters for people and pets in case of major disasters by maintaining a list of appropriate emergency shelter locations. These sites should be geologically stable and well connected to evacuation routes.

Related Policies: HS.P-32, HS.P-34, HS.P-36

Department/Agency: Office of Emergency Services

Funding Source: General Fund

Time Frame: Ongoing

HS.I-40: Improve public education and awareness regarding what to do in case of a catastrophe, and promote public education and awareness programs for each type of natural disaster potentially affecting the county. Education programs should reach all parts of the population through school programs, public service announcements, and sponsored events like Disaster Preparedness Week.

Related Policies: HS.P-32, HS.P-34, HS.P-37

Department/Agency: Office of Emergency Services

Funding Source: General Fund

Time Frame: Ongoing

Coordination with Other Agencies and Organizations

HS.I-41: Encourage full coordination, communication, and implementation between federal, state, and local governments regarding disaster planning and preparedness. Create a regional disaster preparedness plan that facilitates resource sharing among the various participating agencies. Participate in collaborative and coordinated efforts of the Delta Emergency Preparedness and Response Team consistent with the Board of Supervisor's approval of the agreement of participation, resolution of commitment, and adoption of statement of compelling need.

Related Policy: HS.P-35

Department/Agency: Office of Emergency Services

Funding Source: General Fund

Time Frame: Ongoing

PUBLIC HEALTH

This section describes the various actions the County can take to encourage an increase in public health by providing opportunities for physical activity, and providing access to healthy foods and to health care. Public health professionals have become increasingly interested and involved with land use planning over the last several years. As national obesity rates and obesity-related illnesses have increased dramatically since 1990, public health professionals have turned to planning as a means to achieve a higher level of public health in the county.

Planning Context

According to the 2014 County Health Rankings and Roadmaps program, Solano County is ranked 31st in the State for overall health of residents. Obesity is one of the most prevalent health concerns for the county. The 2012 California Health Institute Survey indicates that more than a third (36%) of adults are obese, a 10% increase from the previous decade; in 2001, 23% of adults were obese. Obesity rates are also higher than the state overall; by comparison, only 25% of adult Californians were obese in 2012. Obesity not only affects one's comfort and mobility, but also has serious related health consequences, including diabetes, heart disease, stroke, and a number of different cancers. **Table HS-1** shows top causes of mortality in the county and their ranking compared to other counties in 2010-2012. Of the top causes, four are obesity related: heart disease, certain cancers, stroke, and diabetes. Solano is ranked 13th among counties for heart disease as a cause of death, and nearly 10% of residents have been diagnosed with diabetes.

Table HS-1
Causes of Mortality in Solano County 2010-2012

Rank	Cause of Death	2010-2012 Deaths (average)	Solano County Death Rate	California Death Rate
27	All Causes	2,872.7	705.7	641.5
47	All Cancers	735.7	175.6	153.3
13	Coronary Heart Disease	331.3	81.2	106.2
58	Alzheimer's Disease	186.0	48.5	30.5
47	Lung Cancer	184.0	44.1	34.8
30	Chronic Lower Respiratory Disease	171.0	43.3	36.2
25	Stroke	146.7	37.0	36.6
12	Accidents	115.0	27.6	27.3
49	Diabetes	98.3	24.1	20.4
49	Prostate Cancer	37.3	23.8	20.5
49	Breast Cancer	54.7	23.4	20.9
49	Pneumonia	76.3	19.0	16.1

Source: California Department of Public Health, County Health Status Profiles 2014.

Public health and urban planning professionals recognize that increasing individuals' physical activity is paramount for the nation's health, and that planning environments that are more conducive to active modes of transportation can have an enormous effect on increasing physical activity rates.

Current research on the relationships between transportation, land use, and public health can be distilled into a few strategies. All of these strategies can increase the amount of bicycling and walking that occurs, thereby increasing physical activity levels and social networks and reducing likelihood of obesity. Increasing the number of walking and bicycling trips also diminishes the need to drive. In turn, this reduces per capita air pollution and the rates of diseases such as asthma that are associated with localized air pollution, and decreases the stress and health risks associated with traffic crashes. Strategies for incorporating public health into land use and transportation decisions include the following:

- Integrating land uses such as retail, office, residential, open space, schools, and child care allows people to easily accomplish basic needs using active transportation such as bicycling or walking rather than having to drive for every trip.
- Compact residential development allows more people to walk to parks, schools, transit, shops, and services. With more people in the same area able to reach these services, compact residential development helps provide greater demand for those services, increasing their long-term availability.
- Streets and buildings that address the street and are built at a pedestrian-scale create places that are safe, vital, and interesting for walkers, bicyclists, and transit users.
- Street and trail networks that accommodate pedestrians and bicycles and are highly interconnected reduce the time and distance needed for pedestrians and cyclists to get from one place to another and make these forms of active transportation more viable.
- Public transportation that is efficient, enjoyable, and extensive alleviates residents' reliance on the automobile, and makes combinations of transportation modes that include active means more likely.
- Parks that are easily accessible by all neighborhoods provide opportunities for active recreation.
- The provision of local healthy food establishments including grocery stores, produce markets, fruit stands, and healthy restaurants encourages people to maintain a healthy diet.

- Removing barriers to siting health clinics and establishing programs that offer health care to uninsured and low-income people increases individuals' access to health care.

In the unincorporated area of Solano County, communities are small and agricultural land uses occupy most of the landscape. Many of the public health strategies listed above are most applicable in the incorporated areas of the county where different land uses can be located near one another and density can be modified. Consequently, it is important for the County to coordinate efforts with the incorporated cities to accomplish goals of integrating public health into planning practice. The agricultural nature of the county also presents important opportunities for access to healthy foods. In order to increase access to fresh, locally-grown produce in the county, some farms need to focus on growing produce for the local market and have a mechanism for selling their products to local residents.

Each chapter's policies and implementation strategies strive to encourage active, healthy lifestyles. This section contains policies and implementation programs for issues not addressed in other parts of the General Plan. Policies and implementation programs in other sections and chapters that are important in relation to public health are not duplicated in this section, but are referenced.

Related Plans, Programs, and Agencies

Solano County Health and Social Services Department

The Solano County Health and Social Services department is responsible for providing services aimed at preventing disease, injury, and premature death. These services include emergency medical services, nutrition services, dental clinic services, and public health nursing.

Health and Social Services Strategic Plan

The Health and Social Services Strategic Plan is the Health and Social Services Department's plan guiding document and focuses on the following four goals: Improve the lives of children; improve the health of those who live and work here, maintain a community that is safe and free from violence, and render quality public service.

Solano County Health Access Strategic Plan

The Health Access Strategic Plan for Solano County was completed by the Solano County Health and Social Services Department in 2006. The Plan analyzes strategies for reducing the use of tobacco, alcohol, and other drugs, and increasing the access to health care for targeted low income and uninsured populations in the county.

Policies

-
- HS.P-38: Integrate public health concerns into land use planning and decision making.
- HS.P-39: Coordinate with public health agencies and groups to provide outreach and services, especially for special needs populations.
- HS.P-40: Increase access to healthy foods throughout the county.
- HS.P-41: Ensure access to health care and social services for all residents, including the elderly and underserved populations. Encourage the provision of health care and the construction of health care facilities.
- HS.P-42: Encourage the provision of child care facilities, particularly near employment centers, community centers, and schools.

Implementation Programs

Regulations

-
- HS.I-42: Promote the establishment of farmer's markets using locally grown produce. Revise the County Zoning Ordinance to allow licensed farmer's markets in unincorporated locations and fruit stands in agricultural areas. Remove barriers to siting of farmer's markets.

Related Policies: HS.P-38, HS.P-40

Agency/Department: Department of Resource Management; Department of Agriculture

Funding Source: General Fund

Time Frame: Ongoing

Development Review

-
- HS.I-42: Promote the use of healthy building materials such as low toxicity paint and nontoxic carpeting.

Related Policy: HS.P-38

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach and Education

HS.I-43: Conduct meetings, workshops, or public hearings to solicit input from interested individuals and organizations on opportunities and recommendations for integrating public health concerns into local land use planning.

Related Policy: HS.P-39

Agency/Department: Department of Health and Social Services; Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

HS.I-44: Provide an annual report to the Board of Supervisors recommending ways that the County may continue to integrate planning and public health.

Related Policies: HS.P-38, HS.P-39, HS.P-40, HS.P-41, HS.P-42

Agency/Department: Department of Health and Social Services; Department of Resource Management

Funding Source: General Fund

Time Frame: Annual, ongoing

HS.I-45: Continue implementing public health programs and services that decrease obesity rates and increase easy access to healthy foods, parks, and recreation opportunities.

Related Policies: HS.P-38, HS.P-40

Agency/Department: Department of Public Health

Funding Source: General Fund

Time Frame: Ongoing

Coordination with Other Agencies and Organizations

HS.I-46: Actively support implementation of health service strategic plans, including the Health and Social Services Strategic Plan and the Solano County Health Access Strategic Plan.

Public Health and Safety Chapter

Related Policy: HS.P-39

Agency/Department: Department of Health and Social Services

Funding Source: General Fund

Time Frame: Ongoing

HS.I-47: Coordinate with public health agencies to provide public outreach and education on how lifestyle changes can affect health.

Related Policy: HS.P-38

Agency/Department: Department of Health and Social Services

Funding Source: General Fund

Time Frame: Ongoing

HS.I-48: Partner with the cities, school districts, and civic organizations to facilitate joint-use of schools and other public areas for public services such as child care and recreation.

Related Policy: HS.P-42

Agency/Department: Department of Health and Social Services; local school districts

Funding Source: General Fund, Service Fees

Time Frame: Ongoing

HS.I-49: Investigate possible strategies for increasing the number of health clinics and medical facilities and health care access for uninsured and low-income families.

Related Policies: HS.P-39, HS.P-41

Agency/Department: Department of Health and Social Services

Funding Source: General Fund

Time Frame: Ongoing

HS.I-50: Work with local community groups to initiate walking, cycling and recreation clubs, sports leagues, and educational speakers discussing issues in public health.

Related Policies: HS.P-38, HS.P-39

Agency/Department: Department of Health and Social Services

Funding Source: General Fund

Time Frame: Ongoing

AIR QUALITY

Simply stated, ambient air quality is a measure of how healthy or clean is a region's air. Poor air quality can have negative health effects on residents, especially sensitive groups such as children, the elderly, and people with pre-existing respiratory conditions. Concentrations of air pollutants, primarily generated by human activity, contribute to poor air quality. Natural factors in Solano County such as terrain, wind, and sunlight can cause poor air quality conditions to persist even if regional emissions decline. Other factors, such as the presence of certain industries, can produce localized areas of poor air quality. The policies and implementation programs included in this section are intended to allow population and economic growth while improving the air quality in Solano County.

Planning Context

Solano County is situated on the boundary of two air basins, each under the jurisdiction of two different air quality management districts as shown in **Figure HS-16**. The southwestern portion of Solano County is located in the San Francisco Bay Area Air Basin (SFBAAB), and is managed by the Bay Area Air Quality Management District (BAAQMD). The northeastern portion of Solano County lies within the Sacramento Valley Air Basin (SVAB), and is managed by the Yolo-Solano AQMD (YSAQMD). The SFBAAB is characterized by complex terrain, consisting of coastal mountain ranges, inland valleys, and bays, which alter normal wind flow patterns. In this area, the Coast Range splits, allowing air to flow out of the SFBAAB, carrying pollution into the SVAB.

In contrast, the SVAB is relatively flat, bordered by the North Coast Mountain Range to the west and the Northern Sierra Nevada Mountains to the east. Air flows into the SVAB through the Carquinez Strait, the only break in the western mountain barrier, and moves across the Sacramento–San Joaquin River Delta. The mountains surrounding the SVAB create a barrier to airflow, which traps air pollutants when winds are calm or there is no precipitation to transport or remove them.

Regional air flow patterns affect air quality by transporting pollutants downwind of sources. Local conditions, such as moderate winds, disperse pollutants and reduce concentrations. When winds are calm, an inversion layer can develop, trapping pollutants in cooler air close to the ground with a cap of warmer air aloft. During summer mornings and afternoons, these inversions are present over much of the county. Summer sunshine

then provides the energy needed for photochemical reactions to take place in the presence of precursor pollutants that form ozone.

Criteria Air Pollutants

Criteria air pollutants are the six most common air pollutants in the United States. Their sources and future trends are provided below.

Ozone is the primary component of smog. It is not directly emitted into the air, but instead is formed through photochemical reactions that combine precursor pollutants (reactive organic gases and oxides of nitrogen) in the presence of sunlight. These reactants that form ozone are byproducts of fossil fuel combustion and the evaporation of chemical solvents and fuels.

Peak ozone concentrations often occur downwind of the precursor emission sources making ozone a pollutant of regional concern.

Emissions of ozone precursors have decreased over the past several years as a result of more stringent motor vehicle standards and cleaner burning fuels. Consequently, ozone concentrations in the SVAB and SFBAAB have declined as well, though concentrations in the SVAB have not declined as rapidly as in other urban areas because of its location and population growth, making it both a generator and receptor of pollutants.

Carbon monoxide (CO) is a colorless, odorless, and poisonous gas produced by incomplete combustion of carbon in fuels. The majority of CO emissions are from mobile sources, such as cars and trucks. The remainder of CO emissions is attributable to stationary and area sources, such as wood-burning stoves, incinerators, and factories. The highest concentrations are generally associated with cold, stagnant weather conditions that occur during the winter. In contrast to ozone, which is a pollutant of regional concern, CO is a pollutant of localized concern.

Nitrogen dioxide (NO_2) is a brownish, highly reactive gas that is present in all urban environments. The major human-made sources of NO_2 are combustion devices, such as boilers, gas turbines, and mobile and stationary internal-combustion engines. Because NO_2 is created and destroyed by reactions associated with ozone, the NO_2 concentration in a particular geographical area may not be representative of the local emission sources. The severity of the adverse health effects depends primarily on the concentration inhaled rather than the duration of exposure. Acute symptoms and prolonged impairment are typically experienced in the respiratory system.

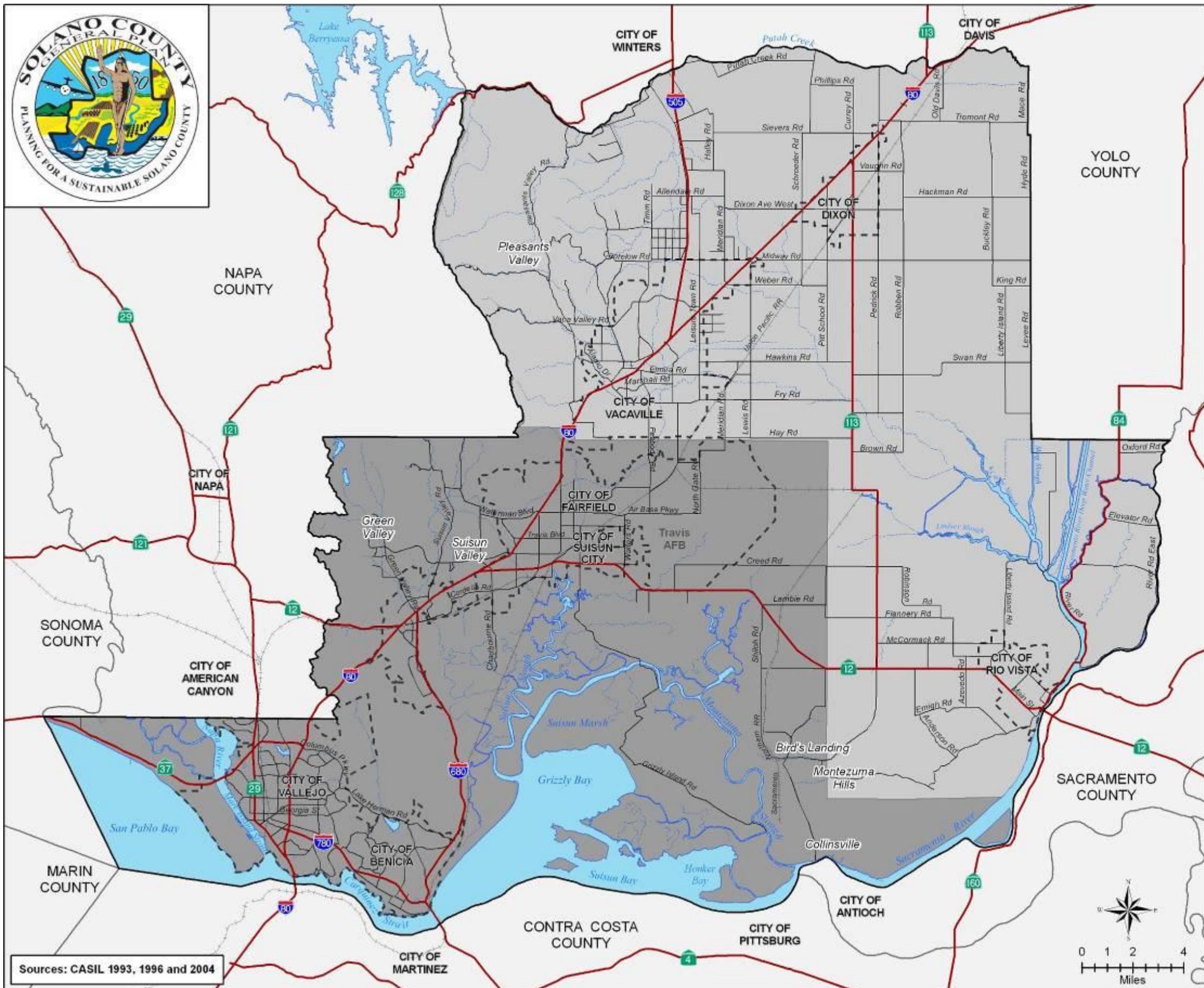
Sulfur dioxide (SO_2) is produced by stationary sources such as coal and oil combustion, steel mills, refineries, and pulp and paper mills. The major adverse health effects associated with SO_2 exposure pertain to the upper respiratory tract. On contact with the moist mucous membranes, SO_2 produces sulfuric acid, which is a direct irritant. Concentration rather than duration of exposure is an important determinant of respiratory effects.

Particulate matter (PM) with diameter of 10 micrometers or less is referred to as PM₁₀. PM₁₀ consists of particulate matter emitted directly into the air, such as fugitive dust, soot, and smoke from mobile and stationary sources, construction operations, fires and natural windblown dust, and particulate matter formed in the atmosphere through other processes. Fine particulate matter (PM_{2.5}) includes a subgroup of smaller particles that have a diameter of 2.5 micrometers or less.

Health effects resulting from air pollution may include breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases, alterations to the immune system, short-term and/or long-term illness. PM_{2.5} poses an increased health risk because the particles can deposit deep in the lungs and may contain substances that are particularly harmful to human health.

Direct emissions of PM increased slightly in the SVAB and SFBAAB between 1975 and 2005 and are projected to increase through 2020. These emissions come largely from areawide sources, primarily because of development. Direct emissions from mobile and stationary sources have remained relatively steady.

Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. Since the phase-out of leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in the air are generally found near lead smelters. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. In California, lead emissions and ambient lead concentrations have decreased dramatically over the past 25 years. Although the ambient lead standards are no longer violated, lead emissions from stationary sources still pose localized hazardous air quality in certain areas, and lead is classified as a toxic air contaminant by the California Air Resources Board (ARB).



Solano County General Plan
Figure HS-16
Air Quality Management District Jurisdictions

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Toxic Air Contaminants

Concentrations of toxic air contaminants (TACs) are also used as indicators of ambient air quality conditions. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

According to the ARB, the majority of the estimated health risk from TACs can be attributed to relatively few compounds, the most important being PM from diesel-fueled engines (diesel PM).

Planning Efforts

Several site design and planning methods can be employed to minimize exposure of sensitive receptors to excessive concentrations of air pollutants and odors. Given the nature of planning in Solano County and the emphasis on focusing development in municipal areas; many of the following methods should be encouraged within the cities, or should be accomplished in coordination with cities. Methods advocated by local air quality management districts and the ARB include:

Abatement. Since mobile-source emissions are of great concern, development should be planned such that the use of motor vehicles is not required to meet daily needs. Minimizing vehicle miles traveled reduces mobile-exhaust pollutant emissions from the source, improving air quality, along with offering many other environmental and social benefits. Planning strategies for new or existing development in order to abate mobile-source air pollutant emissions include, but are not limited to, mixing of land use types (e.g., residential, office, retail, parks, and schools are within walking distance with pedestrian barriers minimized), creating a pedestrian- and bicycle-friendly environment through providing facilities and accessibility, providing convenient and efficient multi-modal transit options, and minimizing the supply of free parking at destinations.

In addition to abatement of mobile-source emissions, abatement of stationary-source emissions from utilities can occur through energy and water conservation strategies at the end use. Within the unincorporated county area, these techniques will receive more focus.

Ensure Land Use Compatibility. The ARB guidance document *Air Quality and Land Use Handbook* recommends distances from which sensitive uses should be cited relative to pollutant emissions sources and visa-versa. For example, residential development should generally be set back approximately 500 feet from major roadways to reduce long-term exposure of the public to excessive concentrations of diesel PM. Similar recommendations exist for facilities that accommodate large numbers of commercial trucks, rail yards, ports, refineries, chrome platers, dry cleaning establishments, and gasoline stations.

In addition, odor-generating facilities, including, but not limited to, landfills or other waste disposal or transfer facilities, waste water treatment, food processing, refineries, manufacturing, rendering plant, and cattle or dairy operations should not encroach on residential or otherwise incompatible uses, and residential uses should not encroach on uses that may cause nuisance odors.

Implement Best Management Practices. Construction and agricultural activities, though typically short-term in nature, can generate large quantities of fugitive dust (PM) emissions. These emissions can cause nuisance if visible quantities of dust intrude onto neighboring property, can cause health problems, as discussed above, if sensitive persons are exposed, and can damage neighboring crops. Standard best management practices, such as regular watering or application of non-toxic soil stabilizers, episodic control to limit activity on days with high winds or forecast poor air quality, installation of wind-breaks, and reestablishment of ground cover on inactive areas can be very effective methods for controlling PM (dust).

To minimize short-term mobile-source emissions from construction or agricultural equipment, operators of older model equipment and pumps should be encouraged to seek engine upgrades through the appropriate air quality management district or ARB incentive program. Engine idling should be minimized when equipment is not in use.

Climate Change

It has been documented by the scientific community that increasing levels of greenhouse gases (GHGs) in the earth's atmosphere are contributing to rising global average temperatures. The most abundant GHG is carbon dioxide (CO₂), which is a byproduct of fossil fuel combustion. CO₂ is removed from the atmosphere through sequestration by vegetation and dissolution into the ocean. Carbon sequestration is the absorption or removal from the air of carbon dioxide by plants or natural processes. These sequestration processes happen naturally, but human-generated emissions have outpaced these removal processes, resulting in excessive GHG concentrations accumulating in the atmosphere, and leading to a subsequent trend of unnatural global warming.

The planning practices noted above to reduce air pollutant emissions from motor vehicles and stationary and area sources also act to minimize CO₂ emissions from the same sources. Other GHGs, such as methane and nitrous oxide, have higher global warming potential, (or are more efficient at warming the climate than an equivalent mass of CO₂) but are emitted in smaller quantities. Using construction materials that sequester carbon, such as lumber, in place of more carbon-intensive materials, such as concrete are good practices to abate GHG emissions from new development. Encouraging renewable energy technology to support the energy needs of new and existing development can also mitigate potential for increased energy demand and associated GHG emissions at the utility provider.

Since the transportation sector is responsible for the majority of GHG emissions in California and nationally, minimizing dependence on motor vehicles is a high priority. Legislation and Executive Orders on the subject of climate change in California (AB 32 and S-3-05) are interpreted to regulate stationary sources of emissions and high GWP-producing sectors. Mobile-source emissions of GHGs that can be attributed to land use decisions are not in themselves their own emissions sector. State law mandates that total statewide emissions must be reduced to 1990 levels by the year 2020 and statewide GHG emissions must continue to be reduced in future years, with 30 years of population and economic growth in place. In order to achieve the goals mandated through state law, every emission sector will need to do its part to reduce total emissions, including land use planning.

Related Plans, Programs, and Policies

Air quality in Solano County is regulated by the U.S. Environmental Protection Agency (EPA), ARB, the YSAQMD, and BAAQMD. Each of these agencies develops rules, regulations, policies, and/or goals to comply with applicable standards. Although EPA regulations may not be superseded, both state and local regulations may be more stringent.

U.S. Environmental Protection Agency

The EPA is the federal agency charged with implementing national air quality programs. EPA's air quality mandates are drawn primarily from the federal Clean Air Act (CAA), which was enacted in 1970. The most recent major amendments to the CAA were made by Congress in 1990. The CAA required EPA to establish national ambient air quality standards.

California Air Resources Board

ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementation of the California Clean Air Act (CCAA). The CCAA, which was adopted in 1988, required ARB to establish California ambient air quality standards (CAAQS). ARB has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate matter, and the above-mentioned criteria air pollutants. In most cases the CAAQS are more stringent than the national ambient air quality standards. In addition, the CAAQS incorporate a margin of safety to protect sensitive individuals.

Air Quality Management Districts

The YSAQMD attains and maintains air quality conditions in the northeastern portion, while the BAAQMD's jurisdiction includes the southwestern portion of Solano County. Both districts prepare plans and programs for the attainment of ambient-air-quality standards, adopt and enforce rules and regulations, and issue permits for stationary sources. The districts also inspect stationary sources, respond to citizen complaints, and monitor ambient air quality and meteorological conditions.

Policies

-
- HS.P-43: Support land use, transportation management, infrastructure and environmental planning programs that reduce vehicle emissions and improve air quality.
- HS.P-44: Minimize health impacts from sources of toxic air contaminants, both stationary (e.g., refineries, manufacturing plants) as well as mobile sources (e.g., freeways, rail yards, commercial trucking operations).
- HS.P-45: Promote consistency and cooperation in air quality planning efforts.
- HS.P-46: Coordinate with and provide incentives to agricultural producers to minimize the impacts of operations on air quality.
- HS.P-47: Promote GHG emission reductions by supporting carbon-efficient farming methods (e.g., methane capture systems, no-till farming, crop rotation, cover cropping, residue farming); installation of renewable energy technologies; protection of grasslands, open space, and farmlands from conversion to other uses; and encouraging development of energy-efficient structures.

Implementation Programs

Regulations

-
- HS.I-51: Adopt a trip reduction ordinance and encourage employers to develop practices that reduce employees' vehicle trips. Such practices include telecommuting, provision of bicycle facilities, and provision of shuttles to public transit.

Related Policies: HS.P-43

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Development Review

-
- HS.I-52: Require that when development proposals introduce new significant sources of toxic air pollutants, they prepare a health risk assessment as required under the Air Toxics "Hot Spots" Act (AB 2588, 1987) and, based on the results of the

assessment, establish appropriate land use buffer zones around those areas posing substantial health risks.

Related Policies: HS.P-43, HS.P-44

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach and Education

HS.I-53: Encourage agricultural best management practices regarding herbicide and pesticide use, odor control, fugitive dust control, and agricultural equipment emissions to minimize air quality impacts.

Related Policy: HS.P-46

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

HS.I-54: Require the implementation of best management practices to reduce air pollutant emissions associated with the construction of all development and infrastructure projects.

Related Policies: HS.P-43, HS.P-44

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

HS.I-55: Require environmentally responsible government purchasing. Require or give preference to the purchase of products that reduce or eliminate indirect greenhouse gas emissions (e.g., giving preference to recycled products over products made from virgin materials).

Related Policy: HS.P-47

Agency/Department: Department Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Coordination with Other Agencies and Organizations

HS.I-56: Comply with the California Air Resources Board and Bay Area or Yolo-Solano Air Quality Management District rules, regulations, and recommendations for Solano County facilities and operations. Such operations shall comply with mandated measures to reduce emissions from fuel consumption, energy consumption, surface coating operations, and solvent usage.

Related Policies: HS.P-43, HS.P-44, HS.P-46

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

HS.I-57: Encourage coordination between the Bay Area and Yolo-Solano Air Quality Management Districts for consistency in air quality planning efforts.

Related Policies: HS.P-45

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

HS.I-58: Use the guidelines presented in the California Air Resources Board's *Air Quality and Land Use Handbook: A Community Health Perspective*, or the applicable Air Quality Management District guidelines and recommendations available at the time, when establishing buffers around sources of toxic air contaminants or odorous emissions.

Related Policy: HS.P-44

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

HS.I-59: Assess air quality impacts using the latest version of the California Environmental Quality Act Guidelines

and guidelines prepared by the applicable Air Quality Management District.

Related Policies: HS.P-44, HS.P-45, HS.P-46

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

NOISE

Planning Context

This section describes actions that can be used to prevent noise conflicts between adjoining land uses. The County's noise reduction and abatement strategy focuses on preventative techniques that protect noise-sensitive land uses from noise producing sources by:

- developing strategies for reducing excessive noise exposure through cost-effective measures and appropriate zoning that avoids placing incompatible land uses in proximity of each other;
- protecting existing regions of the county where noise levels are currently acceptable and also locations that are deemed "noise-sensitive";
- protect existing noise-generating commercial and industrial uses from encroachment of new noise-sensitive developments;
- prevent new noise-generating commercial and industrial uses in Solano County from encroaching on noise-sensitive land uses; and
- provide sufficient information regarding existing and future community noise levels so that noise may be effectively considered in land use planning.

The County's noise policies and implementation programs were created to support the County's vision to create a place where people can live, work, and play in close proximity. To successfully integrate these lifestyle needs, noise sources need to be designed, developed, and maintained in a way that does not affect residential neighborhoods, schools, hospitals, places of worship, and other noise-sensitive land uses. For the purposes of this chapter, noise-sensitive land uses include schools, hospitals, rest homes, long-term care facilities, mental care facilities, and residences. Industrial and commercial land uses may cause noise but are essential for economic growth. Through careful planning, these land uses can continue to operate and grow to support the economy of the county.

Measuring Noise

Noise is defined as unwanted sound. It can cause stress and annoyance within a community. This section provides standards for analyzing future projects that may contribute to an increase in noise levels. The proposed policies and programs outline control measures for preventing excessive noise, while still allowing necessary noise sources to exist. The primary method for meeting these two goals is by separating noise-sensitive land uses, such as housing, schools and parks, from noise-producing land uses, such as highways, airports, and industry.

Because of the ability of the human ear to detect a wide range of sound, noise levels are expressed in logarithmic units called decibels (dB) to avoid a very large and awkward range in numbers. The audible range of hearing in humans is 0 dB to 130 dB. Above 130 dB damage may occur to the ear.

Because the human ear is not equally sensitive to all audible frequencies, a frequency-dependent rating scale was devised to relate noise to human sensitivity. An A-weighted dB (dBA) scale performs this compensation by discriminating against frequencies that are more sensitive to humans. The basis for compensation is the faintest sound audible to the average ear at the frequency of maximum sensitivity. This dBA scale has been chosen by most authorities for the purpose of regulating environmental noise. Typical indoor and outdoor noise levels are presented in **Table HS-2**.

With respect to how humans perceive and react to changes in noise levels, a 1 dBA increase is imperceptible, a 3 dBA increase is barely perceptible, a 6 dBA increase is clearly noticeable, and a 10 dBA increase is subjectively perceived as approximately twice as loud. For these reasons, a noise level increase of 3 dBA or more is typically considered to be substantial in terms of the degradation of the existing noise environment.

Two 24-hour descriptors commonly used to characterize ambient noise levels include the day-night noise level (L_{dn}) and the Community Noise Equivalent Level (CNEL). L_{dn} is the 24-hour energy mean (average) noise level with a 10 dB "penalty" for noise events that occur during the noise-sensitive hours between 10:00 p.m. and 7:00 a.m. The L_{dn} descriptor attempts to account for the fact that noise during this specific period of time is a potential source of disturbance with respect to normal sleeping hours. The CNEL is similar to the L_{dn} described above, but with an additional 5 dB "penalty" added to single noise events that occur during the noise-sensitive hours between 7:00 p.m. to 10:00 p.m., which are typically reserved for relaxation, conversation, reading, and television. If using the same 24-hour noise data, the reported CNEL is typically approximately 0.5 dB higher than the L_{dn} . Noise levels of 60 dB L_{dn} /CNEL are often used as a benchmark when assessing noise levels. Outdoor noise levels that exceed 60 dB L_{dn} /CNEL are generally considered inappropriate in residential areas.

Table HS-2
Typical A-Weighted Sound Levels of Common Noise Sources

Loudness Ratio Level	A-Weighted Sound Level (dBA)	
128	130	Threshold of pain
64	120	Jet aircraft take-off at 100 feet
32	110	Riveting machine at operators position
16	100	Cut-off saw at operators position
8	90	Bulldozer at 50 feet
4	80	Diesel locomotive at 300 feet
2	70	Commercial jet aircraft interior during flight
1	60	Normal conversation speech at 5–10 feet
1/2	50	Open office background level
1/4	40	Background level within a residence
1/8	30	Soft whisper at 2 feet
1/16	20	Interior of recording studio

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Noise Performance Standards

Daytime noise standards are typically set at noise levels that would not annoy or impede human interaction or function in outdoor activity areas. Nighttime noise standards are typically set to result in acceptable noise levels that would not interfere with sleep for most people inside a building with windows closed. In general, noise standards are designed to prevent annoyance or sleep disruption in sensitive members of the public.

Table HS-3 shows the acceptable noise levels for various land use categories, and is used when determining a proposed project's noise impact.

Table HS-3
Land Use Noise Compatibility Guidelines

Land Use Category	Community Noise Exposure (L_{dn} or CNEL, dBA)			
	Normally Acceptable ¹	Conditionally Acceptable ²	Normally Unacceptable ³	Clearly Unacceptable ⁴
Residential—Low Density Single Family, Duplex, Mobile Home	<60	55–70	70–75	75+
Residential—Multifamily	<65	60–70	70–75	75+
Transient Lodging—Motel, Hotel	<65	60–70	70–80	80+
Schools, Libraries, Churches, Hospitals, Nursing Homes	<70	60–70	70–80	80+
Auditoriums, Concert Halls, Amphitheaters		<70	65+	
Sports Arena, Outdoor Spectator Sports		<75	70+	
Playgrounds, Neighborhood Parks	<70		67.5–75	72.5+
Golf Courses, Riding Stables, Water Recreation, Cemeteries	<75		70–80	80+

Land Use Category	Community Noise Exposure (L_{dn} or CNEL, dBA)			
	Normally Acceptable ¹	Conditionally Acceptable ²	Normally Unacceptable ³	Clearly Unacceptable ⁴
Office Building, Business Commercial, and Professional	<70	67.5–77.5	75+	
Industrial, Manufacturing, Utilities, Agriculture	<75	70–80	75+	

Notes:

CNEL = community noise equivalent level; dBA = A-weighted decibel; L_{dn} = day-night average noise level

¹ Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

² New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

³ New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design. Outdoor areas must be shielded.

⁴ New construction or development should generally not be undertaken.

⁵ These standards are not applicable for development within the airport compatibility review area. Development in the airport compatibility review areas are subject to standards in the applicable airport land use plan.

Source: State of California Governor's Office of Planning and Research 2003, EDAW 2007

Table HS-4 provides acceptable outdoor and interior noise levels for land uses.

Table HS-4
Noise Standards for New Uses Affected by Traffic and Railroad
Noise

New Land Use	Sensitive Outdoor Area (dBA L _{dn})	Sensitive Interior ¹ Area (dBA L _{dn})	Notes
All Residential	65	45	²
Transient Lodging	65	45	^{2, 3}
Hospitals and Nursing Homes	65	45	^{2, 3, 4}
Theaters and Auditoriums	—	35	³
Churches, Meeting Halls, Schools, Libraries, etc.	65	40	³
Office Buildings	65	45	³
Commercial Buildings	—	50	³
Playgrounds, Parks, etc.	70	—	
Industry	65	50	³

Notes:

dBA = A-weighted decibels; L_{dn} = day-night average noise level

¹ Interior-noise-level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.

² If these uses are affected by nighttime railroad passages, the potential for sleep disturbance shall be addressed.

³ Where there are no sensitive exterior spaces proposed for these uses, only the interior-noise-level standard shall apply.

⁴ Hospitals are often noise-generating uses. The exterior-noise-level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.

Table HS-5 defines noise performance standards for nontransportation noise sources. In addition, properties located within an influence area surrounding Travis Air Force Base, Rio Vista Municipal Airport or Nut Tree Airport are also subject to the more stringent noise/land use compatibility standards of the applicable Airport Land Use Compatibility Plan (ALUCP). Figure LU-6 shows the areas in which land use proposals must comply with the standards of the applicable ALUCP. **Figures HS-17, HS-18, and HS-19** show the noise contour lines surrounding the three airports. These are provided here for informational purposes only. For the appropriate standards, please see the applicable ALUCP.

Table HS-5
Nontransportation Noise Standards—
Average (dBA L_{eq})/Maximum (dBA L_{max})¹

Receiving Land Use	Outdoor Area		Interior²	Notes
	Daytime	Nighttime	Day and Night	
All Residential	55/70	50/65	35/55	
Transient Lodging	55/75	—	35/55	3
Hospitals and Nursing Homes	55/75	—	35/55	4.5
Theaters and Auditoriums	—	—	30/50	5
Churches, Meeting Halls, Schools, Libraries, etc.	55/75	—	35/60	5
Office Buildings	60/75	—	45/65	5
Commercial Buildings	55/75	—	45/65	5
Playgrounds, Parks, etc.	65/75	—	—	5
Industry	60/80	—	50/70	5

Notes:

L_{eq} = equivalent or energy-averaged sound level; L_{max} = Highest root-mean-square sound level measured over a given period of time

- ¹ The standards shall be reduced by 5 dBA for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards, then the noise level standards shall be increased at 5-dBA increments to encompass the ambient.
- ² Interior-noise-level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.
- ³ Outdoor activity areas of transient lodging facilities are not commonly used during nighttime hours.
- ⁴ Hospitals are often noise-generating uses. The exterior-noise-level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
- ⁵ The outdoor activity areas of these uses (if any), are not typically utilized during nighttime hours.

Noise Contours

The county noise environment can be described with contours derived from monitoring and modeling major sources of noise. A noise contour is a line overlaid on a map or aerial photograph that depicts where a certain noise level occurs. Future noise contours have been estimated with information about baseline and projected land development and associated transportation activity. The contours assist in setting policies for land use planning and establishment of development standards. Contours are provided for roadway noise, railroad noise, and aircraft noise.

Roadway Noise

Figure HS-17 shows the roadway noise contours for baseline year 2006. As the figure illustrates, major highways represent the major sources of noise. **Figure HS-18** identifies the estimated roadway noise contours for year 2030 based upon future estimated traffic levels. Interstates 80, 505, 680, 780 and SR 12 are the most heavily traveled roadways in Solano County and therefore have the largest noise impact areas. Given the topographic complexity of Solano County, these contours should be considered conservative estimates of traffic noise exposure and not absolute lines of demarcation, to be supplemented by detailed and project-specific study as needed.

Railroad Noise

Figure HS-19 shows railroad noise contours along the Union Pacific Railroad (UPRR) tracks. Railroad activity in Solano County consists mainly of freight and passenger operations on the UPRR tracks. The UPRR tracks extend from the southwest portion to the northern portion of the county. It is difficult to predict future railroad noise exposure in Solano County without knowing if, or to what degree, railroad activity may change in the future. Therefore, **Figure HS-19** was developed using 1,200-foot distances to the 60-dB L_{dn} railroad noise contours for various numbers of future daily train activity in Solano County. The data assume that railroad operations in Solano County would occur uniformly throughout day and nighttime hours.

Aircraft Noise

Estimated noise contours for Travis Air Force Base are shown in **Figure HS-20**. Travis Air Force Base is located in the central portion of Solano County just east of the City of Fairfield, and is home to three Air Force Command Units. The base occupies approximately 7,100 acres of land, with two 11,000-foot runways oriented northeast-to-southwest away from existing housing developments. Military aircraft are not subject to the same noise standards as commercial aircraft and often fly lower flight patterns.

Estimated noise contours for Rio Vista Municipal Airport are shown in **Figure HS-21**. Rio Vista Municipal Airport is located in the southwest corner of Solano County 3 miles north of the City of Rio Vista.

Estimated 2025 noise contours for Nut Tree Airport are shown in **Figure HS-22**. The Nut Tree Airport is located in the central portion of the county within the city limits of Vacaville.

Stationary Noise Source Control

Activities at industrial, commercial, recreational, and public service facilities can also generate noise levels that adversely affect adjacent sensitive land uses. From a land use planning perspective, stationary noise source control strategies focus on two goals: (1) preventing the introduction of new stationary noise sources near noise-sensitive areas and (2) preventing encroachment of noise-sensitive uses on existing stationary noise sources. The first goal can be achieved by applying noise performance standards to proposed stationary noise sources. The second

goal can be met by requiring that new noise-sensitive uses near existing stationary noise sources include project features that ensure compliance with noise performance standards.

Noise Reduction in Land Use and Site Planning

The major noise sources in Solano County consist of Interstate 80 and local traffic on city streets, commercial and industrial uses, active recreation areas of parks, outdoor play areas of schools, railroad operations, and aircraft overflights. To compensate for these high levels of noise, buffering can be used to mitigate noise issues by placing space between incompatible land uses. This reduces exposure by increasing the distance between a noise source and a noise-sensitive receptor. Land buffers can take many forms, including open space, frontage roads, recreational areas, and storage yards. The ability to reduce noise with this technique is limited by the surrounding land and characteristics of the noise source.

Noise reduction is approximately minus 3 to 6 dB per doubling of distance from a line and point source, respectively.

Related Plans, Programs, and Policies

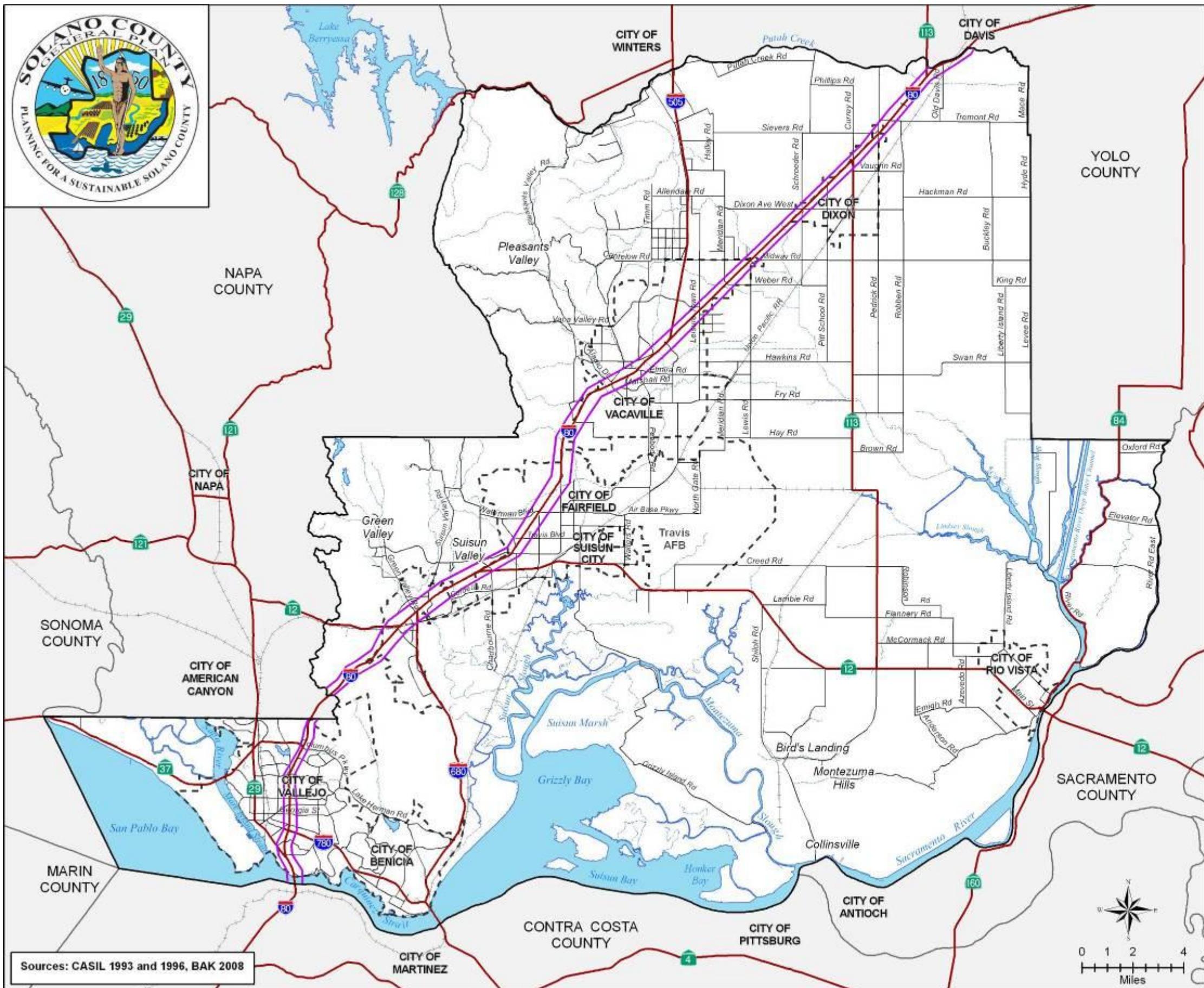
California Noise Insulation Standards (Title 24)

Title 24 of the California Code of Regulations establishes standards governing interior noise levels that apply to all new multi-family residential units in California. These standards require that acoustical studies be performed before construction at building locations where the existing L_{dn} exceeds 60 dB. Such acoustical studies are required to establish mitigation measures that will limit maximum L_{dn} levels to 45 dB in any habitable room.

Policies

-
- | | |
|----------|---|
| HS.P-48: | Consider and promote land use compatibility between noise-sensitive ¹ and noise-generating land uses when reviewing new development proposals. |
| HS.P-49: | Encourage design that minimizes negative effects of noise without compromising aesthetic values and pedestrian and auto connectivity. |
-

¹ For the purposes of this chapter, noise-sensitive land uses include schools, hospitals, rest homes, long-term care, mental care facilities, and residences. Outdoor activity areas are considered to be the portion of a noise-sensitive property where outdoor activities would normally be expected (i.e., patios of residences and outdoor instructional areas of schools). Outdoor activity areas for the purposes of this section do not include gathering spaces alongside transportation corridors or associated public rights-of-way.



Solano County General Plan

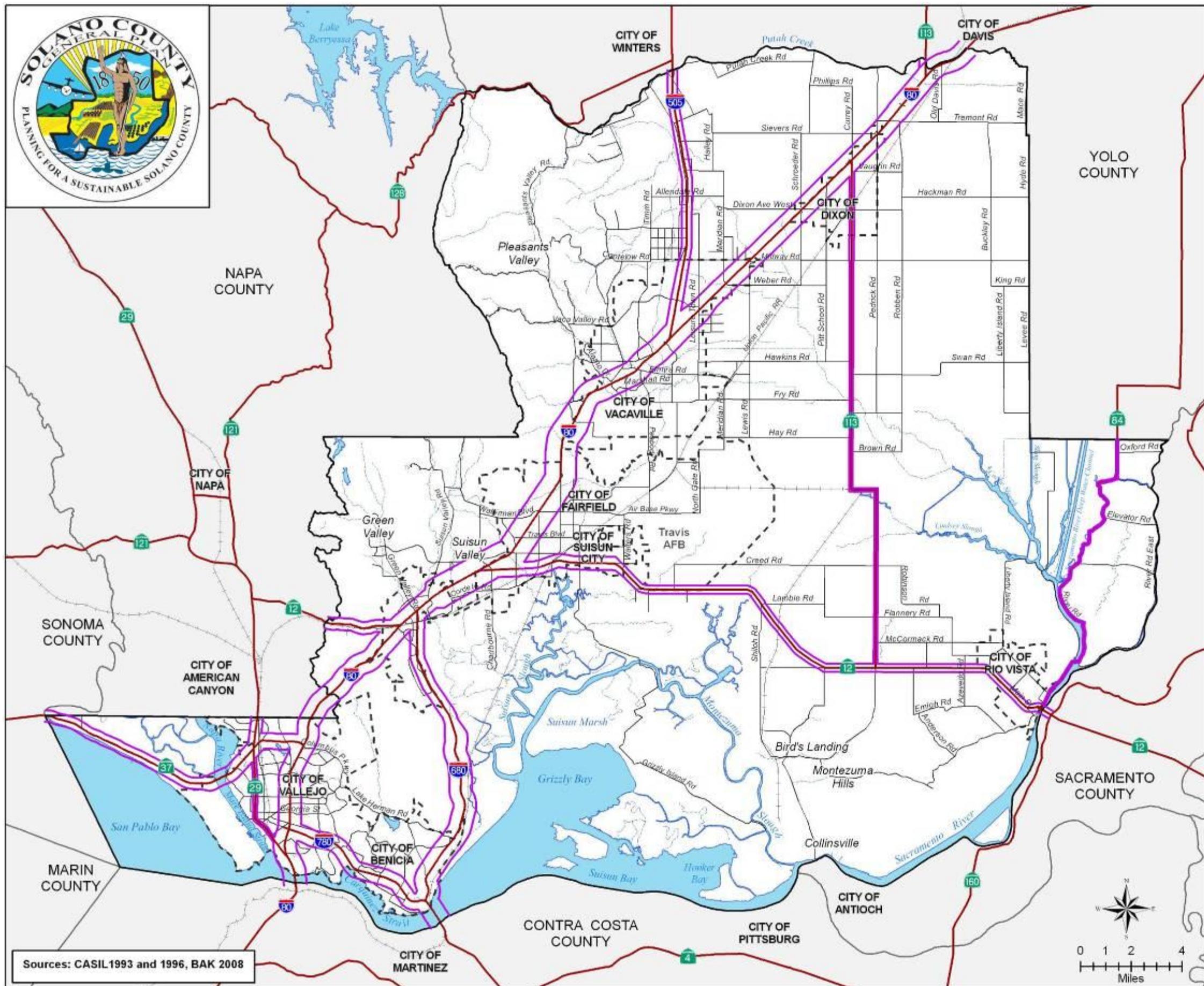
Figure HS-17

Roadway Noise Contours (2006)

Legend

- 60 dB Ldn Noise Contours
- Basemap Layers
- Roadways
- Highways
- Railroads
- Streams and Creeks
- Major Water Features
- Municipal Service Areas
- Adjacent Counties

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Solano County General Plan

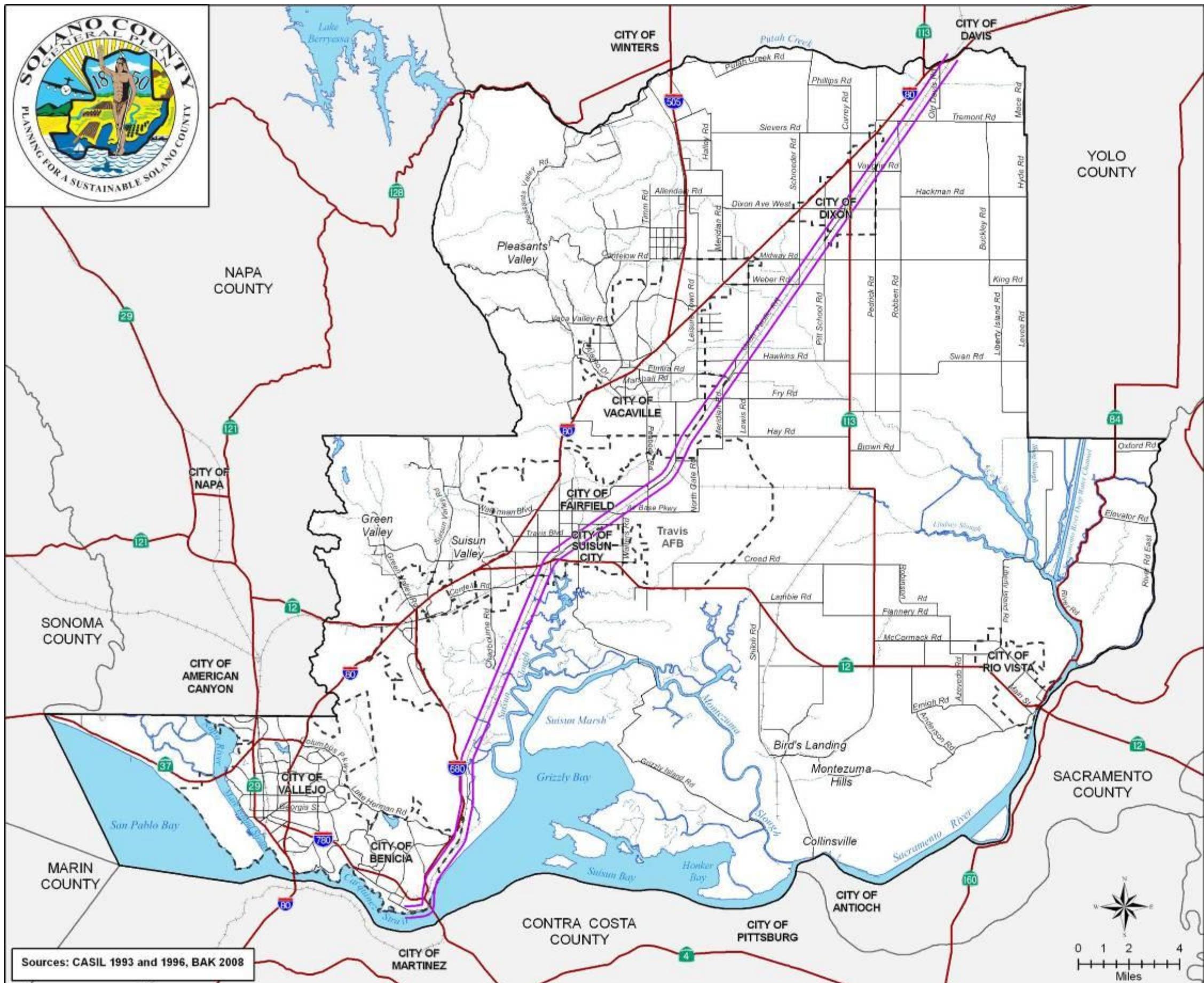
Figure HS-1S

Roadway Noise Contours (2030)

Legend

- 60dB Ldn Noise Contours
- Basemap Layers
- Roadways
- Highways
- Railroads
- Streams and Creeks
- Major Water Features
- - Municipal Service Areas
- Adjacent Counties

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Solano County General Plan
Figure HS-16
Railroad Noise Contours

- Legend**
- 60dB Ldn Railroad Noise Contours
 - Basemap Layers
 - Roadways
 - Highways
 - Railroads
 - Streams and Creeks
 - Major Water Features
 - Municipal Service Areas
 - Adjacent Counties

*Generalized railroad noise contours assuming
45 operations per day
(1,200 feet to the 60 dB Ldn contours)

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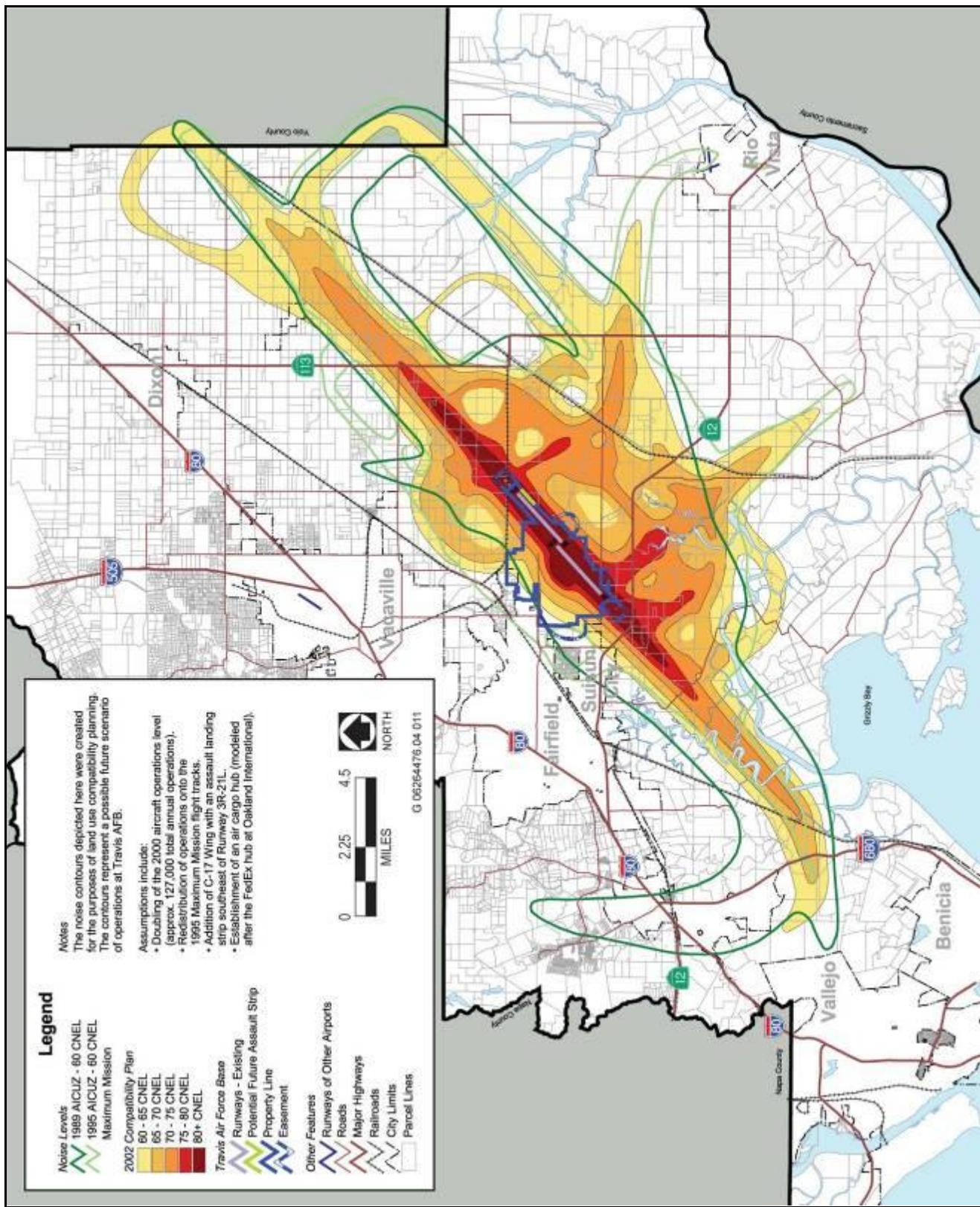


Figure HS-20 Travis Air Force Base Noise Contours

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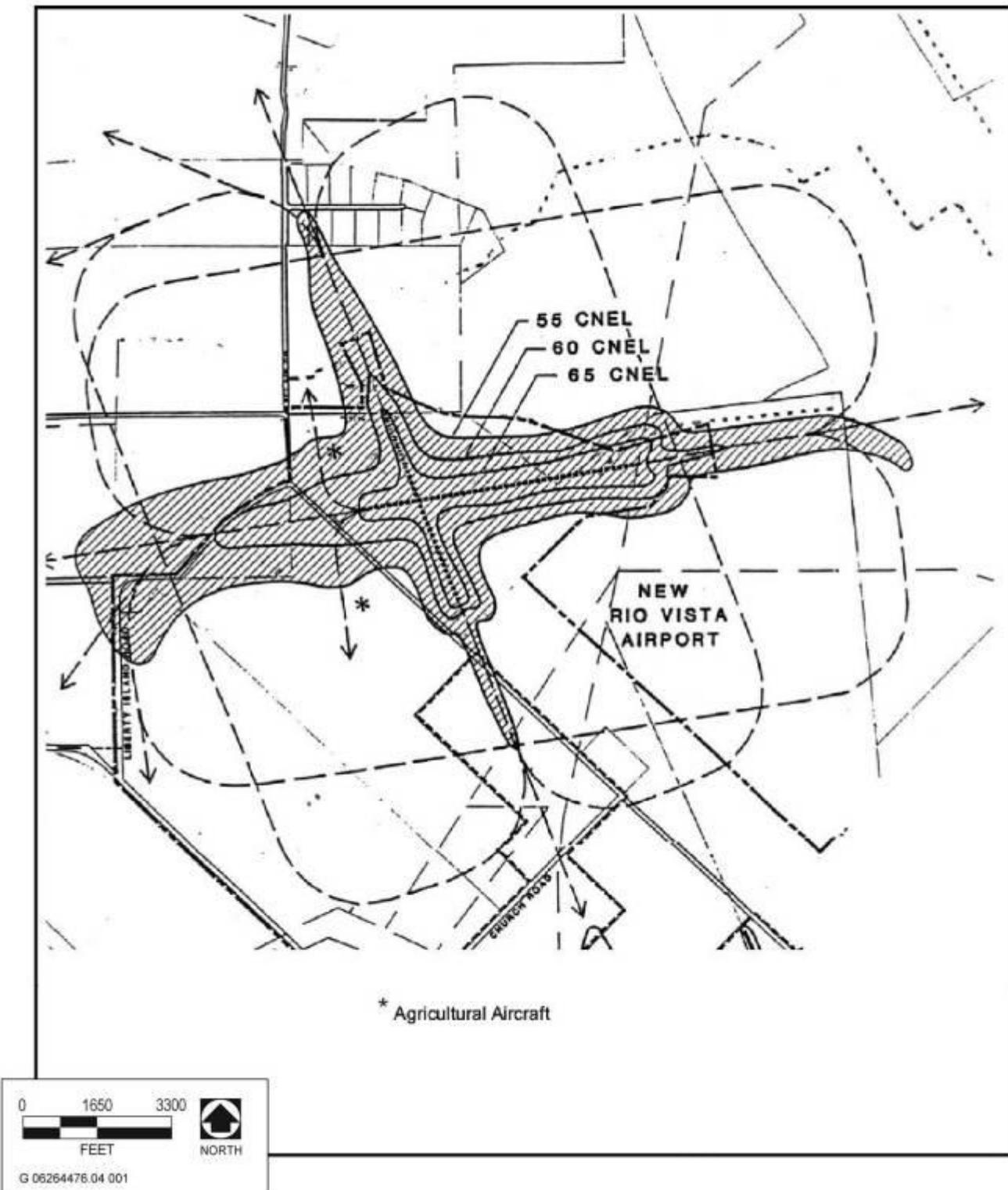


Figure HS-21
Rio Vista Municipal Airport Noise Contours

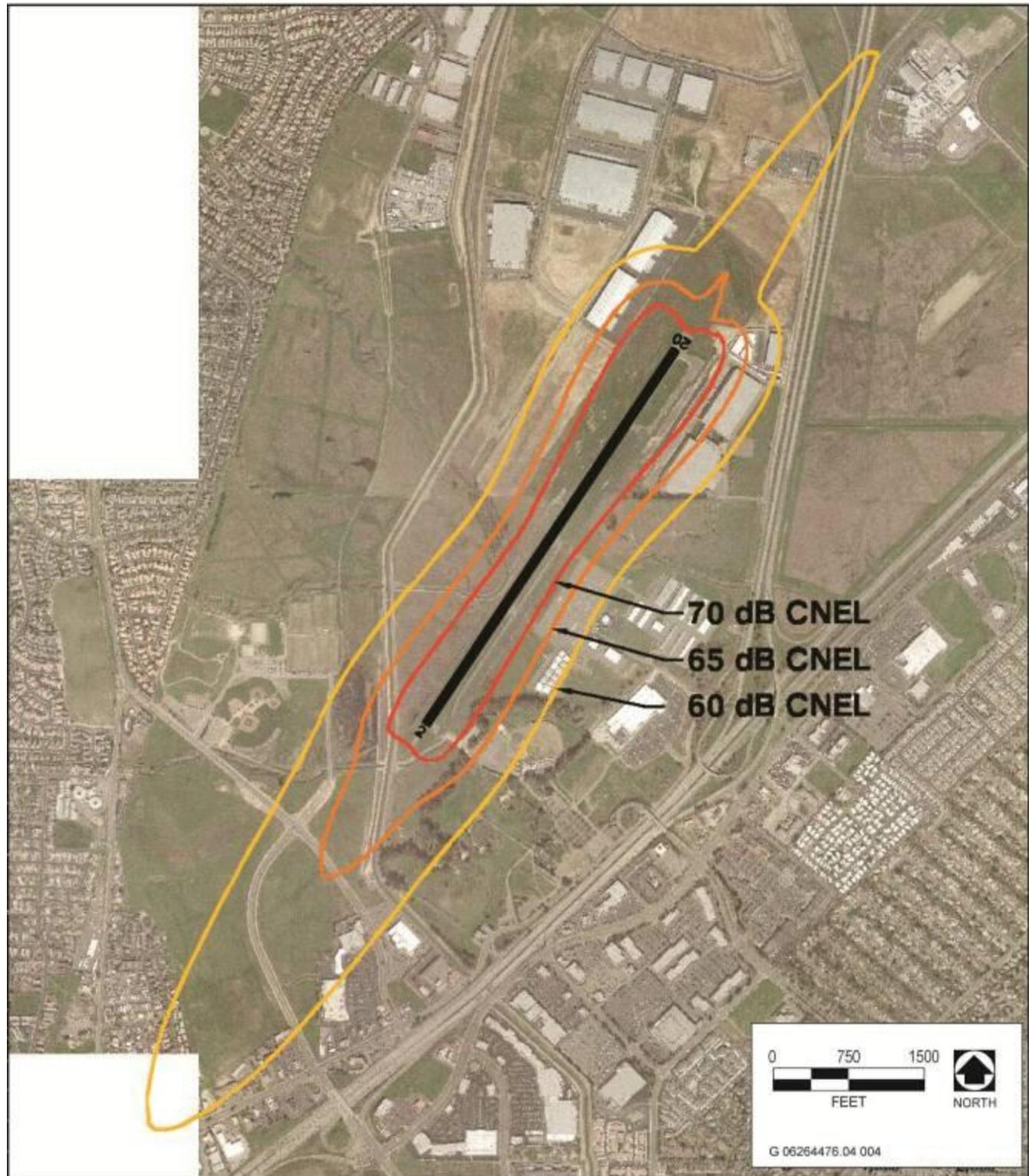


Figure HS-22
Nut Tree Airport Noise Contours

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- HS.P-50: Ensure that development in the vicinity of the Travis Air Force Base or the Rio Vista or Nut Tree airports is compatible with existing and projected airport noise levels.
- HS.P-51: Develop strategies with residents and businesses to reduce noise conflicts.
- HS.P-52: Minimize noise conflicts between current and proposed land uses and transportation networks by encouraging compatible land uses around critical areas with higher noise potential.

Implementation Programs

Regulations

-
- HS.I-60: Develop, adopt and implement a County noise ordinance that includes:
- performance standards and exemptions;
 - restrictions on noise-emitting construction activities based on standards for construction equipment;
 - regulations for mobile or single event types of noise emissions or noise generated by added equipment including truck loading and unloading, operation of construction equipment, and amplified music;
 - standards to ensure that the County personnel charged with enforcing such an ordinance are properly trained and equipped for on-site measurement techniques and other necessary tasks; and
 - standardized, broadly accepted documented procedures for noise measurement collection to ensure that field measurements are conducted in a consistent manner.

Related Policy: HS.P-51

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Adopt by 2016

Funding, Physical Improvements, and Capital Projects

-
- HS.I-61: Trucks tend to generate noise in excess of applicable standards, but goods movement by truck is necessary to support the area's economy. Thus, continue to designate and maintain

established truck routes where noise conflicts with land uses are least likely to occur.

Related Policy: HS.P-52

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Development Review

HS.I-62: When reviewing new development proposals,

- Require noise abatement measures to ensure that noise levels will not exceed those indicated in Tables HS-3 and HS-4.
- Require buffering between noise-sensitive land uses and noise sources unless a detailed noise analysis is conducted and noise abatement measures can be taken to reduce noise to acceptable levels as shown on Tables HS-3 and HS-4.
- Where development projects produce, or are affected by, nontransportation-related noise, require the inclusion of project features that will enable the project to achieve acceptable levels specified in Table HS-4, as measured at outdoor activity areas of existing and planned noise-sensitive land uses.
- Require noise mitigation to reduce construction and other short-term noise impacts as a condition of approval for development projects by applying the performance standards outlined in Table HS-4. The total noise level resulting from new sources and ambient noise shall not exceed the standards in Table HS-4, as measured at outdoor activity areas of any affected noise sensitive land use except:
 - If the ambient noise level exceeds the standard in Table HS-4, the standard becomes the ambient level plus 5 dB.
 - Reduce the applicable standards in Table HS-4 by 5 dB if they exceed the ambient level by 10 or more dB.
 - Under the conditions outlined below, require acoustical studies to be prepared as part of the development review process to ensure adequate analysis of proposed development and incorporation of noise-reducing features in project designs. Acoustical studies with appropriate noise abatement measures will be required for all discretionary projects where any of the following conditions apply:

- "Planning for a Sustainable Solano County"
- The project is located within the existing or future 60 dB CNEL transportation noise contours as measured at outdoor activity areas of noise-sensitive land uses.
 - The project will cause future traffic volumes to exceed 5,000 average daily trips on any roadway that fronts residential, institutional, and open space land uses or will cause traffic volume to increase by 25 percent or more, on any of these roadways.
 - The project will introduce noise or vibration sources associated with mechanical equipment operations, entertainment, maintenance, and facility operations.
 - The project is a proposed residential use in the vicinity of existing and proposed commercial and industrial areas.
 - The project is proposed in an area where existing noise levels exceed acceptable levels in Table HS-4 as measured at outdoor activity areas of noise sensitive land uses.
 - Where it is not possible to reduce noise levels in outdoor activity areas to 60 dB or less using practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB may be allowed, provided that all available exterior noise level reduction measures have been implemented.

Related Policies: HS.P-48, HS.P-50, HS.P-51, HS.P-52

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

HS.I-63:	Refer proposed development projects within areas requiring airport land use compatibility review to the Airport Land Use Commission. Ensure that new development complies with the noise standards contained within the Airport Land Use Compatibility Plans. Maintain buffers between the airports and incompatible land uses.
----------	---

Related Policies: HS.P-48, HS.P-51, HS.P-52

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

HS.I-64: Promote the use of berms, landscaping, setbacks, or architectural design for noise abatement, in addition to conventional wall barriers, to enhance aesthetics and minimize pedestrian barriers. Development of noise-sensitive land uses in areas exposed to existing or projected levels of noise from transportation, stationary sources, or agricultural operations exceeding, or estimated to exceed, levels specified in Table HS-2 shall require transportation planning, traffic calming, site planning, buffering, sound insulation, or other methods to reduce noise exposure in outdoor activity areas and interior spaces to the levels specified in Table HS-2.

Related Policy: HS.P-49

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach and Education

HS.I-65: Make public information readily available on noise abatement measures, the physical and psychological effects of noise on public health and welfare, and the meaning of noise levels and standards. Consider specific mailings to properties located in existing or projected 60 dB contours.

Related Policy: HS.P-51

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Coordination with Other Agencies and Organizations

HS.I-66: Locate industrial and other noise-generating land uses away from noise-sensitive land uses and/or require substantial noise sources to be completely enclosed within buildings or structures.

Related Policies: HS.P-48, HS.P-51

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

HS.I-67: Identify locations and work with the California Department of Transportation to mitigate freeway noise in those locations where such noise adversely affects unincorporated residential land uses.

Related Policy: HS.P-52

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

CLIMATE CHANGE

Climate change refers to a change in the state of the climate that persists for an extended period, due to natural processes or human-caused changes in the composition of the atmosphere or land use. According to the United Nations Intergovernmental Panel on Climate Change², the scientific authority on the subject of climate change, certain findings are widely accepted by the scientific community:

- Greenhouse gases (GHGs) such as CO₂, when introduced to the atmosphere, have a warming effect on the earth;
- Human activities have increased the levels of GHGs in the atmosphere since pre-industrial times; and
- The global climate has warmed by an average of 1.0–1.7 degrees Fahrenheit from 1906–2005.

Greenhouse gases are gases that trap heat in the atmosphere. GHGs include CO₂, methane, nitrous oxide, and fluorinated gases. The human activities during which these gases are emitted include burning, manufacturing, and transportation-related combustion of fossil fuels. Livestock and solid waste emissions also contribute to the build-up of GHGs.

The effects of climate change include increased global average temperature, subsequent altered precipitation patterns, thermal expansion of the ocean, and loss of polar and global sea ice extent. In Solano County, these changes would translate to sea level rise with possible coastal flooding, water and energy supply issues, and increased risk of wildfire. Global average temperature rise and indirect impacts associated with climate change could increase distribution of diseases or cause other public health problems; increase hazards such as flooding, storms, and wildfires; cause habitat loss and species endangerment and extinction; and negatively affect agricultural operations.

Responding to climate change requires a two-pronged approach. On one hand, the County must adapt to change and prepare for the already-foreseeable effects of global warming that has already occurred and, on the other hand, the County must coordinate with agencies, residents, and businesses to modify behavior to decrease the countywide contribution to greenhouse gas emissions and associated impacts on the climate.

The California Global Warming Solutions Act of 2006 (AB 32) was created by the state legislature to address the threat global warming poses to the state's "economic well-being, public health, natural resources, and the environment". The Act directs ARB to "adopt a statewide greenhouse gas emissions limit

² IPCC 2007; *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC*. Cambridge University Press. Cambridge, UK.

equivalent to the statewide greenhouse gas emissions levels in 1990 to be achieved by 2020." This requires maintaining an inventory of emission levels as well as taking action to decrease emission levels to 1990 levels.

All jurisdictions in California have a responsibility to contribute to this effort with changes in operations, technology, and policies that enable residents and businesses to follow suit. This General Plan provides the framework for Solano County's approach to climate change and GHG emission reduction. The types of policies that deal with climate change and GHG emissions are far ranging.

Climate change has been recognized as a threat that could alter social, economic, and ecological conditions in Solano County. Concentrations of GHGs have dramatically increased in the atmosphere due to the use of fossil fuel-based energy sources. Additionally, the earth's capacity to capture and store GHGs has been reduced due to extensive deforestation and the conversion of grasslands and other carbon rich natural communities, as well as saturation of the ocean with dissolved CO₂. Rigorous scientific analysis conducted by the Intergovernmental Panel on Climate Change, the National Research Council of the National Academies, and other agencies indicates that increased concentrations of GHGs have already begun to result in significant warming, and will lead to changes in precipitation patterns, sea level rise, and more frequent extreme weather events. Other effects could include constrained water and energy availability, more frequent flooding, health impacts related to increases in vector borne diseases, air pollution, and habitat loss.

State and local governments will play a critical role in addressing this important issue. California's climate change legislation has generally been interpreted to apply to stationary sources of GHG emissions. However, the County believes that in order to achieve the emission reductions mandated in AB 32, each sector must do its fair share to reduce total emissions, and local action is needed to manage and measure activity within each sector as it relates to land use planning. For this reason Solano County has established a GHG emissions reduction goal of 20 percent below 2005 levels by 2020, which exceeds guidance provided in the ARB Scoping Plan and BAAQMD CEQA Guidelines. To achieve this goal, the General Plan has developed a broad spectrum of policies and implementation programs. These policies and programs have been integrated throughout the relevant General Plan chapters, as detailed in **Table HS-6**.

Table HS-6
Climate Change-Related Policies and Programs

Issues	Topic	Policies or Programs
Community Form	Compact development	LU.P-1 LU.I-14 PF.P-6 PF.P-7
	Commercial use locations	LU.P-21

Issues	Topic	Policies or Programs
		ED.P-3
		ED.I-1
		LU.P-26
	Industrial use locations	LU.P-27
		ED.P-3
		ED.I-1
	Liv e-work uses	LU.P-39
	Access to employment centers	TC.P-2
		HS.P-9
	Floodplain and open space management	HS.P-10
		HS.I-2
		HS.I-7
		HS.P-20
	Wildfire safety	HS.P-22
		HS.P-23
		HS.I-26
	Satellite office centers	ED.P-14
	Economic adaptation to climate change	ED.P-15
County Operations	Solano County as model	RS.P-51
	Alternativ e fuel County v ehicles	RS.I-42
		TC.I-1
Ecosystems		SS.P-3
	Wildlife migration	RS.P-5
		RS.I-9
	Habitat Management	RS.P-2
		RS.P-12
		RS.P-6
Energy Efficiency	Tree protection and planting	RS.I-3
		RS.I-5
		RS.I-8
	Energy efficient technology	RS.P-48
Green Building	Exceed Title 24 requirements	RS.I-38
	LEED certification standards	RS.I-46
	Public education	RS.I-59
	Energy efficient appliances	RS.I-47
	Construction materials	RS.I-48
	Efficient infrastructure systems	PF.P-3
Renewable Energy		RS.P-49
	Incentiv es and requirements	RS.P-50
		RS.I-51
	Reduced fossil fuel reliance	RS.P-54

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Public Health and Safety Chapter

"Planning for a Sustainable Solano County"

Issues	Topic	Policies or Programs
	Public education	RS.P-56
	Municipal use	RS.I-40
	Solar streetlights	RS.I-57
	Protecting renewable resources	RS.I-58
Transit	Adequate transit to employment centers	TC.P-17
	Systems along major corridors	TC.P-14
		TC.P-16
	Expanded passenger rail service	TC.I-20 TC.I-13 TC.I-14
		TC.P-24
		TC.P-26
	Non-motorized transportation	TC.I-18 TC.I-19 TC.I-20
		TC.I-10
	Transit-supporting facilities	TC.I-11
	Shorten travel distances	TC.P-3
	Technical solutions	TC.P-6
Transportation	Roadway maintenance and design	TC.P-12
	Incentives and BMPs to improve habitat and air quality	AG.P-19 AG.P-25 AG.I-20
	Health and Safety	HS.P-45
	Carbon sequestration and sustainable farming methods	AG.P-21 AG.I-21
Air Quality	Off-road vehicles	RS.I-47
	Reduce vehicle emissions	HS.P-43 HS.I-53
		HS.P-47
	GHG emission reduction strategies	HS.I-56 HS.I-57 HS.I-58
Water Management	Water use efficiency and reduced consumption	PF.P-10 PF.P-11 PF.P-20 PF.I-16 PF.I-17 PF.I-18 PF.I-9

Issues	Topic	Policies or Programs
Waste Reduction	Waste management and recycling	
	Solid waste reuse	PF.P-28

Related Plans, Programs, and Policies

Primary among the County's strategies to address climate change are implementation of the Solano County Climate Action Plan (CAP) and Sea Level Rise Strategic Program (SLRSP) adopted by the Board of Supervisors in 2011. Together, the policies and programs contained in the General Plan and the additional measures and implementing actions in the CAP and SLRSP will allow Solano County to take a leadership role in responding to this critical issue. Achieving the targeted reductions and successful adaptation to the impacts of climate change will demand genuine effort from civic leaders, residents, and businesses.

Solano County Climate Action Plan

The CAP addresses both GHG emissions from activity within the county (residential, commercial, industrial, transportation, and agricultural sectors) and the emissions specifically from County operations. The CAP provides a GHG emissions inventory for the base year 2005 and a forecast of GHG emissions for the year 2020 assuming no action is taken at the state or local level. The CAP determines the quantity of emissions to be reduced to meet the reduction target of 20 percent below 2005 levels.

The CAP establishes measures and implementing actions necessary to achieve the County's reduction target. General Plan policies and programs related to GHG reductions are referenced in the CAP. The CAP includes provisions to track countywide progress and make necessary changes to facilitate achievement of the goal.

Solano County Sea Level Rise Strategic Program

The SLRSP summarizes the potential effects of sea level rise on Solano County, identifies properties and resources susceptible to sea level rise in order to prioritize management strategies, and develops protection and adaptation strategies to meet the county's and region's goals. The SLRSP was prepared in 2011 with the cooperation of regional partners including the San Francisco Bay Conservation and Development Commission (BCDC) and the Bay-Delta Authority. The program also prioritizes impacts of sea level rise in the county based on a cost-benefit analysis using BCDC's regional prioritization process.

Policy

HS.P-53:	Evaluate the potential effects of climate change on Solano County's human and natural systems and prepare strategies that allow the County to appropriately respond and adapt.
----------	--

Implementation Program

Regulations

Program HS.I-68:	Continue to implement and monitor the measures and implementing actions contained in the Solano County Climate Action Plan adopted in 2011.
------------------	---

Related Policies: HS.P-53 and those identified in Table HS-6

Agency/Department: Board of Supervisors; Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

HS.I-69:	Periodically update the greenhouse gas emissions inventory as specified in the Solano County Climate Action Plan, in accordance with the most recently established methodologies of the California Climate Action Registry or California Air Resources Board.
----------	---

Related Policies: HS.P-43, HS.P-44, HS.P-45, HS.P-46, HS.P-47

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Every three years, beginning in 2015

HS.I-70:	Continue to implement the measures and implementing actions set forth in the Sea Level Rise Strategic Program for Solano County adopted in 2011.
----------	--

Related Policies: HS.P-9, HS.P-10

Agency/Department: Board of Supervisors; Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

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CHAPTER

6 ECONOMIC DEVELOPMENT

INTRODUCTION

The quality of life experienced by county residents is greatly affected by the local economy and their sense of economic well being. Solano County's economy is rooted in viable agriculture, Travis Air Force Base, and other major private and public employment sectors. However, Solano County's economy increasingly depends on diversified businesses and industries, a highly trained and educated workforce, accessibility to major highways and freeways, available housing at a cost local workers can afford, and infrastructure ready to serve businesses.

One tool for sustaining and growing a healthy local economy is a comprehensive economic development program. This program can encourage creation of jobs for county residents and promote the County's fiscal health. Targeted economic development efforts and careful land use planning can also link workers to workplaces, promote sustainable communities, limit air pollution, and reduce greenhouse gasses. Targeted economic development contributes to the County's fiscal and financial health, allowing for higher levels of public services and programs.

The General Plan vision statement, developed by the Citizens' Advisory Committee (CAC), states:

We will seek to diversify our local economy so that many activities contribute to our prosperity. This diversity will provide opportunities for small and large businesses to thrive in a variety of industries. We will nurture businesses that employ our residents and offer opportunities for local ownership. We will encourage businesses that support our communities and provide our people with sufficient incomes to meet their basic needs. While we protect our current economic assets, we will prepare for economic change as we compete in an increasingly global marketplace....

...We will provide our citizens with an opportunity to succeed through quality education, skills training, and lifelong learning....

The vision statement was used to focus the strategic directives of the Economic Development chapter of the General Plan:

- support for targeted development of manufacturing and office uses (encouraging diverse business opportunities in a variety of industries);
- business recruitment and retention efforts (encouraging businesses that support our communities); and
- education and workforce investment (preparing for economic change and future opportunities; supporting quality education, skills training, and lifelong learning; and supporting jobs with sufficient incomes to support basic needs).

This chapter includes goals, policies, and implementation programs that outline the County's path toward its economic future as identified in the vision statement. It is intended to serve as a basic strategy document for the County's ongoing economic development activities.

Scope and Content

This chapter of the General Plan begins with a description of Solano County's economic context. This description is followed by goals, strategies, and issues informed by that context and used to communicate the reasoning behind the County's policy direction. The chapter closes with a list of policies and implementation programs that have been developed based on the goals, strategies, and issues.

Purpose and Relationship to Other General Plan Chapters

The Governor's Office of Planning and Research (OPR) has established guidelines for the content of general plans in California. Economic development is not one of the required elements of a general plan; however, OPR provides guidance on potential issues of focus for economic development should a city or county choose to address this topic in its general plan. Among the issues suggested by OPR are business development and retention by sector, employment development, and business recruitment.

This chapter addresses these issues, including policies related to land use and circulation that support the County's economic development goals. The General Plan must contain an assessment of needs for specific land uses (including commercial and industrial land uses) based on projections of future economic conditions. In this General Plan, that assessment is contained in this Economic Development chapter. The availability of infrastructure necessary to support these services (usually considered within the Land Use Element and the Circulation Element) is also discussed in this chapter.

Large areas of the county are agricultural, and many economic development issues are related to agricultural practices, businesses, and industries. Many issues identified by the CAC and the public during the preparation of the General Plan were associated with agricultural land use. The Agriculture chapter includes goals and policies related to encouraging and expanding agriculture in the County. Because agriculture comprises such a large portion of the economy, policies relating to the subject are expected to have a noticeable effect on the County's economy. Therefore the goals, policies, and implementation measures of this chapter work hand-in-hand with the Agriculture chapter.

The intensity, location, and mix of land uses identified on the Land Use Diagram in the Land Use chapter shape the future possibilities for Solano County's economy. Transportation issues and the provision of utilities are also important to economic development. Goals and policies in the Circulation and Public Facilities and Services chapters will affect the suitability of development areas for future economic activities.

PLANNING CONTEXT

Economic goals, policies, and implementation programs contained in this chapter are intended to support the County's General Plan vision and are meant to move the county toward its desired economic future. The economy strategy contained in this chapter is based on an understanding of the historical trends and existing conditions in Solano County at the time of the General Plan's preparation.

Economic development describes the actions that can be taken by the County to promote or support job- and revenue-generating uses. These actions include:

- land use decisions that ensure that an adequate amount of land is available for commercial and industrial uses;
- incentives or support activities to attract and retain businesses, including financial incentives or technical assistance;
- actions designed to affect the economic environment of the county, including support for education, child care, and job training; and
- efforts to maintain or increase the "quality of life" in Solano County, which have the effect of increasing the county's desirability for potential businesses and residents.

The following sections provide a brief overview of existing conditions to provide context for the goals and policies. The information presented in this chapter includes the composition of the local economy such as important and growing industries and employers. Information is also presented on the economic characteristics of the county's residents, including occupations, education, and work locations/commuting patterns. Finally, some specific locations within the county that are

targeted for future commercial and/or industrial use are presented and briefly discussed. Unless otherwise noted, the references and numbers quoted in this section originate from the Local Economy Background Report prepared in support of the General Plan update.

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Economic Conditions and Trends

Given the changing nature of the economy, it is important to understand the conditions that provide the foundation for proposed goals and policies. These conditions affect future decision making related to land use and economic development. Many factors in the local economy can vary from year to year. The following descriptions provide snapshots of trends in Solano County related to the local economy, including employment and the labor force.

Employment

Current Employment

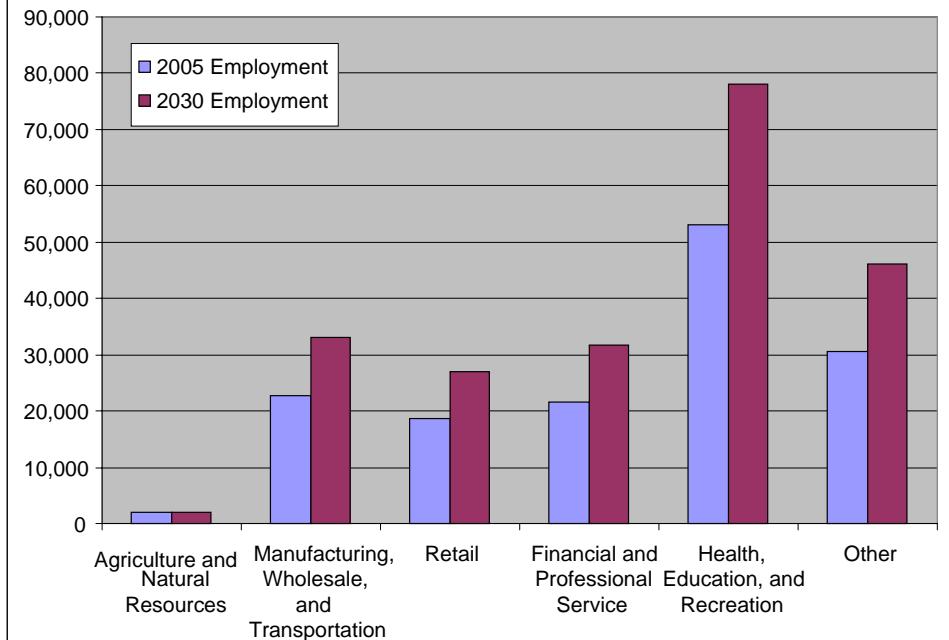
Solano County is located in the San Francisco Bay Area, which includes Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties. The Association of Bay Area Governments (ABAG) provides current employment data and future employment projections for the nine-county area. The following employment trends are based on ABAG estimates and projections (Figure ED-1):

- As of 2005, health, education, and recreation service jobs represented about 36 percent of employment in Solano County, and about 30 percent in the Bay Area region as a whole.
- Manufacturing, wholesale, and transportation was the next largest industry sector, with about 15 percent of Solano County employment, followed by financial and professional service jobs, at about 14 percent.
- Travis Air Force Base (AFB) employed about 14,000 workers in 2007, making it the largest single employer in Solano County and accounting for nearly 10 percent of the county's total

jobs. The 10 largest private employers included four health care providers, and generally corresponded with the high percentage of jobs in the health, education, and recreational services sector.

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Figure ED-1: Employment by Industry, 2005 and 2030



Future Employment

Between 2000 and 2030, ABAG projects that Solano County as a whole (unincorporated county and the seven cities) can expect to have 217,910 jobs. The largest number of new jobs from 2000 to 2030 will be in health, education, and recreational services, followed by manufacturing, wholesale, and transportation. The county will gain 25,030 jobs in health, education, and recreational service through 2030. Financial and professional service jobs are expected to increase by a greater percentage (73 percent or 10,270 jobs) than the region¹. This sector has previously had few jobs in the county, but is expected to grow in importance.

Within the unincorporated areas of the county, ABAG projects 5,110 jobs in 2030, a net loss of 60 jobs. This reflects a slight decline in agriculture and

¹ The ABAG region includes the nine Bay Area Counties: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma.

natural resource jobs and retail jobs in the unincorporated county, although agriculture and natural resources are projected to remain stable and retail is expected to gain more than 8,000 jobs through 2030 in the county as a whole. ABAG projects an increase of 70 jobs in the manufacturing, wholesale, and transportation sector, with smaller gains in other sectors.

With the changes in the County's land use policy, these projections are expected to be altered. The updated General Plan includes expanded industrial and commercial areas in the unincorporated areas of the County and new policies that encourage additional commercial and industrial uses. These policies include encouraging agricultural processing, expanding the allowed uses on certain agricultural lands, and increasing the emphasis on infrastructure improvements to serve selected sites.

The Labor Force

Following are some key statistics about the relationship between residents who form the labor force in Solano County, their educational attainment, and the types of jobs available in the county in relation to the ABAG region. The skills of the labor force compared to the jobs available in the county may not be closely aligned, as indicated by the extent of commuting to work and types of jobs in which residents are employed versus the types of jobs available in the county.

- Approximately 42 percent of the county's resident workforce commuted to work outside Solano County in 2000. In the region², 28 percent of the workforce also commuted outside of their county. With 41.5 percent and 42 percent respectively, Contra Costa and San Mateo joined with Solano as the counties with the largest percentage of commuters in the region.
- Regionally, residents employed in professional or managerial occupations in 2000 was 44 percent, compared to only 31 percent in Solano County as a whole. Conversely, the county had more residents involved in service occupations (16 percent countywide versus 13 percent regionally) and construction occupations (11 percent countywide versus 7 percent regionally).
- In Solano County in 2000, 21.4 percent of residents had at least a bachelor's degree, compared to 37.4 percent in the region.
- In 2005, the countywide unemployment rate was slightly higher than the regional unemployment rate. The county also has lower educational attainment levels than the region as a

² Based on the Census 2000 data for the San Francisco-Oakland-San Jose CMSA which is comprised of the same counties as the ABAG region.

whole, and lower educational attainment is often correlated with higher unemployment rates.³

ECONOMIC DEVELOPMENT STRATEGIES

The Economic Development chapter of the General Plan is intended to serve as the County's strategic economic development plan through 2030. The strategic direction for the County is based on the economic conditions and opportunities at the time of the General Plan update, as described above. Economic conditions are expected to change and develop over the life of the plan, and continuing evaluation of economic activities and successes (which is included as an implementation program) will lead to shifts in the strategy over time.

Employment

Job Growth

Travis AFB is by far the largest employer in Solano County, with an estimated employee base of 14,000. Maintaining the future viability of this economic resource is of the utmost importance. Efforts to maintain Travis AFB's viability include preserving space for future expansion using the Travis Reserve Area designation on the Land Use Diagram, as well as limiting incompatible uses adjoining Travis that may restrict the range of activities at the base and within the reserve area.

Land use decisions affect the number and types of jobs that are available in the unincorporated area. Changes to the Land Use Diagram create new or expanded opportunities for commercial and industrial growth. Policies in this plan support the development of economic uses that are most appropriate for the unincorporated area. These include heavy industry and uses requiring large land areas or access to unique resources (including the deep water port, agriculture, and minerals).

Projections for Solano County, particularly within the unincorporated area, indicate that the County should prioritize creating additional manufacturing space to support growth in the manufacturing, wholesale, and transportation sector, as well as creating additional office space for support services. With the changes in land use and policies, a high priority for the County is the support for agriculture, recreation and tourism in areas such as Collinsville, Suisun Valley, and other interior valleys.

Targeted Industries

As part the economic strategy, the County will focus on the growth of specific industries. These industries will be identified on an ongoing basis

³ Bureau of Labor Statistics. 2007. Education Pays. Available: <<http://www.bls.gov/emp/emptab7.htm>>. Last Updated May 29, 2007. Accessed December 19, 2007

with the cooperation of the Solano Economic Development Corporation (Solano EDC) as stated in program ED.I-6.

Commercial and industrial services supporting agriculture have been identified during the General Plan outreach process as a desired component of the county's future economic development. Alternative energy industries, including solar, biofuels, wind, and land uses or processes with the potential to generate energy (cogeneration), could be another economic focus given the county's existing and potential natural, agricultural, and industrial resources.

Other targeted industries and business identified by Solano EDC include: biotechnology and other light manufacturing; value-added food and beverage processing; divisional and office headquarters, backroom office, and information technology; transportation, logistics and distribution; construction production materials; research and development including technology-based start ups; and tourism and hospitality.

Several of the possible future locations for commercial and industrial uses are located along the I-80 corridor and may be appropriate for uses serving the traveling public. Expanded tourism and eco-tourism associated with the wine and fruit industry and the county's location in the Sacramento-San Joaquin Delta (Delta) area are also possible. Expanding tourism might make retail and commercial development feasible at several of the identified opportunity sites, which are currently located away from population centers and transportation infrastructure.

Several incorporated areas within Solano County have the potential to support job-generating development. Potential commercial and industrial areas are located throughout the county, often near existing cities. Many of these areas have environmental and infrastructure constraints (e.g., roads, sewer, and water) that would need to be addressed before any development can occur. Industrial or office uses that do not rely on nearby residential uses, and tourist- or visitor-oriented retail uses are also feasible within the unincorporated areas of the county. Industrial uses that are not appropriate near urbanized areas (such as those involving hazardous materials, noise, or odors) may be appropriate in areas that are isolated from population centers, such as Collinsville and the Lambie Road area.

Labor Force

Data on Solano County's workforce and employment indicate a potential disconnect between the higher skills and qualifications of county residents and the jobs available within the county. Currently, higher paid residents are more likely to commute outside the county. Based on the county's educational attainment pattern, Solano County's workers would be expected to be employed in more skilled trade jobs than in the region as a whole. As Solano County grows, an emphasis on increasing educational opportunities and educational attainment can help to draw jobs with higher pay to the county. Workforce development strategies aimed at

matching available skills with potential new businesses in the county will be important. Supporting child care near or accessible to jobs is also important. The type and quality of educational opportunities in Solano County, including public and private elementary and secondary schools as well as colleges and universities, affect individuals' and businesses' decisions about where to locate. Maintaining and improving the quality of educational facilities in the county is necessary for the County's economic development efforts.

Opportunity Sites

Several sites within the unincorporated county could provide opportunities for economic development. Solano County's assets for attracting new and expanded businesses include the relative scarcity and high prices of land elsewhere in the Bay Area, coupled with increasing traffic congestion. These conditions may attract employers that are looking to relocate their offices to a more affordable area that is closer to where employees live.

A variety of different sites are available for commercial and/or industrial development, including sites with easy access to Interstate 80 (I-80) and I-680, access to existing rail lines, sites located within and at the edge of existing urbanized areas, and sites that are isolated from other potentially incompatible uses. Other opportunities for the county are tied to existing amenities and economic assets such as the Delta; Travis AFB; the University of California, Davis; and several interstate highways. Firms that want to be located near one or more of these amenities will find that unincorporated Solano County provides this opportunity.

Solano County is currently regulated by the Orderly Growth Initiative, which requires a popular vote before the redesignation of agricultural land or open space land into another use. The opportunity sites described below include areas within unincorporated Solano County that can potentially or currently do support job-generating uses, based on their current designations, without requiring redesignation from agricultural or open space use. Other opportunity sites, the North Vacaville and Dixon areas and Neighborhood Agricultural centers will be subject to the Orderly Growth Initiative and voter approval before their uses can be changed to accommodate increased commercial and/or industrial development.

Areas that represent opportunities for additional commercial and/or industrial development are presented in Figure ED-2 and described below.

Interior Valleys

The interior valleys—Suisun Valley, Lagoon Valley, Vaca Valley, and Pleasants Valley—provide opportunities for the County to promote tourism related to local agriculture, particularly fruit and wine production. Existing considerations, including Williamson Act contracts and the Orderly Growth Initiative, must be addressed before future development occurs to support expanded tourism in this area. Such future development may

include restaurants, bed and breakfast inns, or tasting rooms in the Neighborhood Agricultural/Tourist centers designated within the Suisun Valley and shown on the Land Use Diagram. Exact locations for Neighborhood Agricultural/Tourist centers for other valleys have not yet been determined, but will be an action item for the General Plan. In addition, the General Plan allows processing, packaging, and sales of agriculture-related and local products on Agriculture-designated parcels. These potential economic activities are described in greater detail in the Agriculture chapter (Chapter 3) of this General Plan.

Collinsville

Water-dependent industrial is a potential long-term use within this area, particularly to the east of Collinsville and buffered from the existing community. Approximately 1,350 acres of land are designated for this use on the Land Use Diagram. Other future uses include environmental education and recreation uses associated with Collinsville's location on the Delta. Existing infrastructure, including inadequate industrial transportation, is a key limiting factor for any future development of this area.

Old Town Cordelia

Several vacant or underused parcels in Old Town Cordelia (7 acres located near the I-80/I-680 interchange) are designated for a mix of uses. This area would be particularly useful for office and professional uses as infrastructure is already available.

North Vacaville

This area includes approximately 660 acres of industrially- and commercially-designated land around the Midway Road/I-505 and Midway Road/I-80 intersections. Existing businesses within the incorporated area of Vacaville are located nearby. These areas may be suitable for industrial manufacturing.

Lambie Road Area

The Lambie Road area comprises approximately 1,525 acres. This area has long been designated for industrial use. As described in the Land Use chapter, this area is designated as a Special Project Area, requiring preparation of a specific plan describing a comprehensive approach to development, environmental, and infrastructure issues (roadway access in particular) before any development could occur in this area. However, the Lambie Road area has the potential to accommodate industrial uses that are not appropriate to place near residential areas.

Solano County General Plan

Figure ED-2

Opportunity Sites

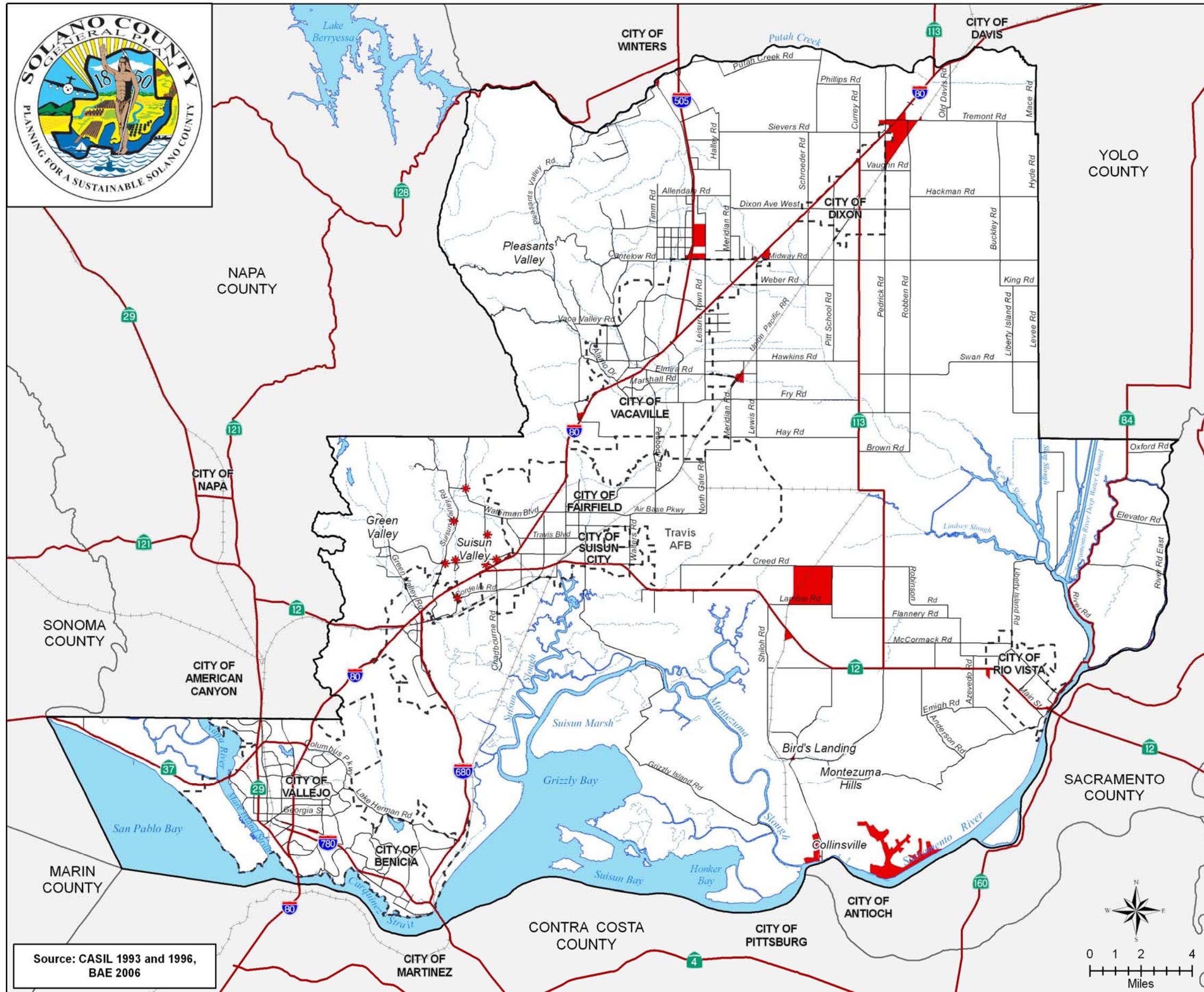
Legend

Opportunity Sites

- Commercial and Industrial Designations
- * Neighborhood Agricultural/Tourist Center

Basemap Layers

- Roadways
- Highways
- Railroads
- Streams and Creeks
- Major Water Features
- Municipal Service Areas
- Adjacent Counties



Dixon Area

This area includes approximately 750 acres (located northeast of the City of Dixon along I-80) designated for Highway Commercial, Service Commercial and Limited Industrial uses on the Land Use Diagram. The Limited Industrial area recognizes the existing industrial uses and is further limited to agricultural service uses by policies in the Land Use and Agriculture chapters. Approximately 265 acres are already developed with highway commercial, service commercial, limited industrial, and agricultural processing and service uses.

Commercial and Industrial Land Use Planning

Employment projections indicate that the largest percentage gains in manufacturing jobs will be located in the unincorporated areas of the county. The County will initially focus economic development efforts for manufacturing uses in areas where manufacturing is likely to be the sole possible use. These sites include parcels surrounded by other industrial uses, and located away from residential uses. The County can focus on filling vacancies in Lambie Industrial Park.

The County will direct new agricultural processing uses to the Winters, Dixon Ridge, Elmira and Maine Prairie, and Suisun Valley agricultural regions defined in the Agriculture chapter and the area northeast of Dixon. The County will direct new manufacturing uses toward vacant parcels located in the North Vacaville area that are currently designated for industrial. The County should focus on promoting office development in the Old Town Cordelia area. This area currently contains both the infrastructure and critical mass to support additional office development.

Infrastructure Planning

Although the County has the opportunity to attract many new employers, it must address the issue of inadequate infrastructure in locations such as Lambie Industrial Park and the Collinsville area. Development in the Collinsville area will not be possible until the County has addressed infrastructure issues in the immediate area, and on roads that lead into the area from SR 12. The County should plan for sufficient infrastructure to carry the critical mass required to make Collinsville a successful commercial and industrial location. Furthermore, the County has additional infrastructure needs in the Lambie Road area that it should address to enable economic development.

RELATED PLANS, PROGRAMS, AND AGENCIES

Economic development activities in Solano County are currently conducted by a variety of public and private agencies and associations in addition to the County government. These groups include the Solano EDC, the seven incorporated cities, and a variety of chambers of

commerce and other private business associations. Together with the County, these agencies and organizations will have substantial roles in implementing the General Plan.

Solano EDC

The Solano EDC is a collaboration of private and public investors that provides a leadership role for economic development marketing in Solano County and its cities. The Solano EDC's goals are as follows:

- Attract and site new business and industry.
- Assist in the retention and growth of existing business and industry.
- Increase international, national, state, and regional market awareness and knowledge of the benefits of doing business in Solano County.
- Enhance the positive business image of Solano County and its seven communities.
- Support the coordination of countywide education and training efforts to prepare the current and future workforce.
- Support the coordination of regional partnerships to help leverage some of the County's economic assets.
- Enhance the community's competitiveness through regional and statewide marketing efforts.

Workforce Investment Boards

The California Workforce Investment Board (WIB) is a state agency that "assists the Governor in setting and guiding policy in the area of workforce development."⁴ This board was formed in response to the federal Workforce Investment Act of 1998. The purpose of the act was to improve employment, training, literacy, and vocational programs.⁵ Through this act, funding was also made available. The WIB has adopted a strategic plan addressing economic development issues and actions throughout the state. This plan calls for the state to develop and support local boards that develop their local and regional economies. The local board, Workforce Investment Board of Solano County offers programs and services to provide employers access to qualified workers, and equip job seekers to compete in the job market.

⁴ California. 2007. California Workforce Investment Board. Available: <<http://www.calwia.org>>. Accessed December 19, 2007.

⁵ Workforce Investment Act of 1998 (PL 105-220)

GOALS

The goals and accompanying policies broadly describe outcomes consistent with three strategies, described previously:

- targeted development of manufacturing and office uses,
- business recruitment and retention efforts, and
- education and workforce investment.

Other goals focus on setting priorities and measuring progress.

-
- | | |
|---------|---|
| ED.G-1: | Maintain and improve the County's strong, diversified economic base and provide for a wide range of employment opportunities and support services, such as job training and child care. |
| ED.G-2: | Maintain and improve Solano County's high quality of life as a way to attract economic activities that increase the county's employment base, improve economic opportunities for local residents, and contribute to the county's fiscal health. |
| ED.G-3: | Develop and maintain a favorable business environment in Solano County through recruitment, expansion, and retention of businesses to promote a closer match between local jobs and labor force skills. |
| ED.G-4: | Promote business development by the County and in coordination with cities. |
| ED.G-5: | Promote education and workforce investment to match residents with employment opportunities and to encourage targeted businesses to locate within Solano County. |
| ED.G-6: | Preserve and expand the county's agricultural base by allowing for a wide range of economic activities that support local agriculture. |
| ED.G-7: | Protect and support Travis Air Force Base in its role as an important part of the county's economy. |
-

POLICIES

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- | | |
|---------|---|
| ED.P-1: | Encourage an efficient and consistent regulatory environment with a predictable development process to encourage growth of existing businesses and attract new businesses to locate within Solano County. |
|---------|---|
-

Economic Development Chapter

- ED.P-2: Support and collaborate with cities and local economic development organizations in an effort to bring new businesses and industry to the county.
- ED.P-3: Work with cities and regional agencies to locate new commercial and industrial development on appropriate sites based on considerations of efficiency, circulation, compatibility with nearby uses, availability of services, safety, impact on habitat resources, and proximity to residents and workers.
- ED.P-4: Collaborate with local and regional agencies and organizations to offer technical assistance to businesses in obtaining economic development grants, loans, and other funds from federal, state, and private sources.
- ED.P-5: Encourage the retention and expansion of existing businesses and provide support for locally owned businesses.
- ED.P-6: Promote workforce investment policies that match training programs to existing and planned job requirements, ensuring that a skilled workforce is available to businesses in the county. Work with the Solano Economic Development Corporation to identify relevant skill sets and coordinate with education and training providers accordingly. Focus on attracting new jobs that pay a living wage.
- ED.P-7: Develop benchmarks to measure the success of economic development activities by the County and collaborating agencies, including Solano Economic Development Corporation and the Solano Workforce Investment Board.
- ED.P-8: Target economic development activities toward particular industries or service areas with special importance to the future of Solano County's economy.
- ED.P-9: Encourage commercial and industrial development to locate in areas with adequate services. Consider the needs of existing and future commercial and industrial uses in infrastructure planning decisions.
- ED.P-10: Cooperate with cities to identify appropriate locations for large or heavy industrial uses and to maintain and expand the supply of land available for these types of use.
- ED.P-11: Work with the cities and Travis Air Force Base to support the base's mission. This includes designating areas surrounding the base meant for potential expansion, and following base protection guidelines set forth by the Governor's Office of Planning and Research.

- ED.P-12: Collaborate with cities; school districts and private schools; health-care providers and child care advocates; and cultural, recreational, and park resource providers to provide services that contribute to a high quality of life and help attract economic opportunities to the county.
- ED.P-13: Collaborate with cities to improve infrastructure in targeted areas where necessary to support economic development policies.
- ED.P-14: Encourage businesses in the Bay Area and Sacramento region to establish satellite work centers near housing concentrations in cities to enable employees of out of county companies to reduce their commutes.
- ED.P-15: Evaluate the potential for economic impacts of climate change on existing industry in Solano County, and plan for the foreseeable effects on those industries. Sustain the local economy and enable resilience by allowing sufficient time to adapt to foreseeable changes in climate.

IMPLEMENTATION PROGRAMS

Funding, Physical Improvements, and Capital Projects

-
- ED.I-1: Identify locations within the county where commercial and/or industrial development is desirable and appropriate. Collaborate with cities and update public works programs to ensure that infrastructure improvements required for desired commercial or industrial development are feasible. Use cost-benefit analyses to determine feasibility.

Related Policies: ED.P-3, ED.P-9, ED.P-13

Agency/Department: County's Administrator's Office/Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach and Education

-
- ED.I-2: Seek feedback on quality-of-life needs during interaction with businesses and non-County agencies. Communicate these needs and collaborate with cities; school districts and private

schools; health care providers and child care advocates; and cultural, recreational, and park resource providers to provide services that contribute to a high quality of life and aid in attracting economic opportunities to the county.

Related Policy: ED.P-12

Agency/Department: County Administrator's Office/Department of Resource Management

Funding Source: General Fund

Time Frame: Every 5 years

ED.I-3: Encourage and cooperate with the Solano EDC to create and maintain a strategic plan which includes the cities and the County.

Related Policies: ED.P-2, ED.P-3, ED.P-5, ED.P-7, ED.P-8, ED.P-10, RS.P-39

Agency/Department: County's Administrator's Office

Funding Source: General Fund

Time Frame: Ongoing

ED.I-4: Collaborate with cities, Solano Economic Development Corporation, and other organizations to offer technical assistance to businesses. Assess needs and available funding periodically, and offer targeted assistance obtaining economic development grants, loans, and other funds from federal, state, and private sources.

Related Policies: ED.P-4, ED.P-5

Agency/Department: County Administrator's Office

Funding Source: General Fund

Time Frame: Ongoing

Coordination with Other Agencies and Organizations

ED.I-5: Seek continuing feedback related to the County's regulations and development process from interested organizations, including the county's chambers of commerce, economic development agencies, labor unions, schools, and the agricultural community. Work to implement changes to address

concerns while maintaining a focus on the County's overall goals.

Related Policy: ED.P-1

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing, Every 5 years

ED.I-6: Encourage the Solano EDC to continue creating a working partnership among the economic development agencies of the County and the cities. Support the Solano EDC's efforts to ensure that the County and cities integrate their economic development planning, and direct new commercial and industrial businesses to desired locations based on efficiency, circulation, compatibility with nearby uses, availability of services, safety, impact on habitat resources, and proximity to workers and residents. Work with the Solano EDC to target particular industries or functions for recruitment based on continuing economic analysis and research.

Related Policies: ED.P-2, ED.P-3, ED.P-8, ED.P-9

Agency/Department: County Administrator's Office

Funding Source: General Fund

Time Frame: Ongoing

ED.I-7: Work with the California Workforce Investment Board, the Workforce Investment Board of Solano County, and other related organizations to solicit feedback on employee training and education from existing and potential businesses. Work with educational and vocational training facilities to ensure that existing and future training needs are being met. Work with businesses and the chambers of commerce to pursue on-the-job training options where possible.

Related Policies: ED.P-6, ED.P-12

Agency/Department: County Administrator's Office

Funding Source: General Fund

Time Frame: Ongoing

Economic Development Chapter

ED.I-8: Support the Solano EDC, the California Workforce Investment Board, the Workforce Investment Board of Solano County, and other agencies involved in the development of measurable economic development objectives and benchmarks. Continuously evaluate past performance and consider changes to improve future success.

Related Policy: ED.P-7

Agency/Department: County Administrator's Office

Funding Source: General Fund

Time Frame: Every 5 years

ED.I-9: Work with the U.S. Department of Defense and Solano County's congressional delegation to seek and pursue funding to support the economic role and mission of Travis Air Force Base. Work with cities and continue to preserve land within the Travis Reserve Area to allow for base expansion. If the status of the base changes, the construction of nonmilitary airport and support uses may be permitted.

Related Policies: ED.P-11, TC.P-21

Agency/Department: County Administrator's Office

Funding Source: General Fund

Time Frame: Ongoing

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CHAPTER

7 TRANSPORTATION AND CIRCULATION

INTRODUCTION

Solano County roadways provide connections between agricultural lands and major State transportation facilities.



The Transportation and Circulation chapter of the General Plan sets forth the policy framework to shape circulation within Solano County. Roadways carrying vehicular traffic represent the primary components of circulation, but other methods of travel are also addressed—bicycle systems, pedestrian connectivity, bus transit, air service, rail service, and waterway

activity. Solano County is expected to continue to experience traffic growth as a result of development within local jurisdictions and the unincorporated county and continued growth in the surrounding counties. The Transportation and Circulation chapter will guide new investment choices within the county and assist in determining the role of new development in addressing future circulation issues.

The predominant circulation issues in Solano County pertain to the conditions and use of county roadways. In particular, the Transportation and Circulation chapter of the General Plan examines the physical roadway characteristics to describe issues surrounding roadway design, upgrading, and maintenance by the Department of Resource Management. In addition, recognition of the roadway standards that exist in the county demonstrates how the County will respond to parties making a dedication of new roadways in the future.

Because unincorporated Solano County encompasses a broad and diverse area, most circulation issues must be examined by looking at the county as a whole. This examination includes the influence of circulation in incorporated cities, as well as through movements that occur between these cities and to and from other counties.

The General Plan vision statement expresses a desire to achieve a sustainable transportation future. Portions of the vision related to circulation include the following:

We will reduce our reliance on automobiles to meet our daily travel needs. By considering human and environmental needs equally, we can create a place where people may choose to live, work, and play within close proximity; a place where nature, farmlands, and water are valued; and a place where people have choices for housing, employment, transportation, and recreation.

The major themes of this chapter and its goals and policies derive from the vision statement:

- reducing reliance on the automobile for all travel purposes,
- providing accessible travel resources for all county residents,
- providing a range of sustainable travel choices that serve county residents and businesses, and
- improving circulation serving the county's agricultural community.

This chapter identifies goals, policies, and implementing programs that serve as an outline to guide the County toward fulfilling this vision.

Purpose

The goals, policies, and implementation programs in this Transportation and Circulation chapter are designed to guide Solano County toward a better quality of life. To provide a framework for this effort, the Governor's Office of Planning and Research has established guidelines for the content of general plans in California. The chapter that contains circulation topics is required to address specific issues.

As defined in the guidelines:

The circulation element is not simply a transportation plan. It is an infrastructure plan addressing the circulation of people, goods, energy, water, sewage, storm drainage, and communications. By status, the circulation element must correlate directly with the land use element. The circulation element has direct relationships with the housing, open-space, noise and safety elements.

The provisions of circulation affect the community's physical, social and economic environment as follows:

Physical—The circulation system is one of the chief generators of physical settlement patterns and its location, design, and constituent modes have major impacts on air quality, plant and

animal habitats, environmental noise, energy use, community appearance, and other environmental components.

Social—The circulation system is a primary determinant of the pattern of human settlement. It has a major impact on the areas and activities it serves, on community cohesion, and on the quality of human life. The circulation system should be accessible to all segments of the population, including the disadvantaged, the young, the poor, the elderly, and the disabled.

Economic—Economic activities normally require circulation for materials, products, ideas and employees, thus the viability of the community's economy is directly affected by the circulation element. The efficiency of a community's circulation system can either contribute to or adversely affect its economy.

Mandatory circulation element issues as defined in the statutes are:

- major thoroughfares,
- transportation routes,
- terminals, and
- other local public utilities and facilities.

In addressing these mandatory issues, cities and counties may consider the following topics:

- streets and highways;
- public transit routes, stops, and terminals;
- transit-oriented development;
- private bus routes and terminals;
- bicycle and pedestrian routes and facilities;
- truck routes;
- railroads and railroad depots;
- paratransit plans and proposals;
- navigable waterways, harbors, and terminals;
- airports;
- parking facilities;
- transportation system management;
- air pollution from motor vehicles; and
- emergency routes.

The guidelines are written in a universal way that should be applied to all areas of California from urban to rural. For most of Solano County outside of the incorporated cities, the content of the General Plan's Transportation and Circulation chapter focuses on the most appropriate actions that address the concerns of rural areas, and encourages responsible development strategies in developing areas near adjacent cities.

Scope and Content

This chapter begins by introducing the County's circulation goals. Separate sections then describe various transportation systems and their potential effects within the county. The topics include:

- general transportation,
- roadways,
- bus transit,
- air service,
- rail services,
- port facilities and ferries, and
- nonmotorized facilities.

Each section contains a summary of conditions followed by a brief overview of applicable federal, state, regional, or county plans, programs, and agencies. Policies and implementation programs specific to each topic then relate back to the overarching goals, which the County will use to ensure general health and safety for its residents.

Relationship to Other General Plan Chapters

The topics discussed in the Transportation and Circulation chapter are related to the contents of many other chapters in the General Plan. These relationships extend beyond the mandated association with land use policies to all other areas because the circulation facilities are used to connect activity centers, economic activity, and government facilities of all kinds (such as fire stations, police facilities, schools, and parks).

This chapter is related to the Land Use chapter because it incorporates the land use analysis into an analysis of the capacity of a circulation system. If the circulation system's capacity is compromised, the County must identify ways to accommodate the problem when determining what land use designations should be changed.

GOALS

The goals of the Transportation and Circulation chapter address the County's desire to address circulation concerns.

The following goals provide a general framework for County circulation. Policies and implementation programs designed to meet these goals are provided within the separate topic areas below.

TC.G-1:	Maintain and improve the County's transportation systems to enhance safety, resident access to basic needs, mobility, and convenience.
TC.G-2:	Promote coordinated approaches to creating, maintaining and improving transportation corridors and facilities by

working with other jurisdictions and transportation agencies in funding and implementing projects.

- TC.G-3: Encourage land use patterns that maximize access and mobility options for commuting and other types of trips, and minimize traffic congestion, vehicle miles traveled (VMT), and greenhouse gas emissions.
- TC.G-4: Encourage the use of alternative forms of transportation such as transit, walking and bicycling to alleviate congestion and promote recreation
- TC.G-5: Encourage and maintain the safe, convenient transfer of goods and services from agricultural lands and industrial locations to regional and interregional transportation facilities.

GENERAL TRANSPORTATION

Planning Context

Transportation facilities are required to connect all other land use activities within and through Solano County. They are also required to link into the larger regional setting. For this reason, careful planning must occur in a regional context.

The need for appropriately sized transportation facilities is based on the overall demand generated by the land uses. Traffic demands must be considered when roadways are developed; such considerations must include not only the number of lanes of a roadway, but also its preferred cross section so that it is safe enough for all users. For congested roadways, adding lanes or other transportation options may be preferable; these strategies must be studied on a corridor-by-corridor basis.

The state, regional, and local transportation investment programs must be coordinated to efficiently determine needs for transportation facilities. To coordinate these various investment programs, this Transportation and Circulation chapter must be consistent with plans from the Solano Transportation Authority (as the designated congestion management agency) and the Metropolitan Transportation Commission (as the designated metropolitan planning organization).

The costs of constructing, operating, and maintaining transportation facilities are considerable. Thus, the analysis indicating which investments are preferred must be unbiased and consistent. The analysis that supports the discussion in this Transportation and Circulation chapter included the use of a travel demand model maintained by the Solano Transportation Authority. This model simulates the aggregate affect of changes to land uses and transportation corridors throughout Solano County, as well as the adjacent counties in Northern California, to indicate the issues and concerns expected to face Solano County in the future.

Related Plans, Programs, and Policies

Regional Transportation Plan

The *Regional Transportation Plan* is a long-range planning document prepared by the Metropolitan Transportation Commission, serving as the federally designated metropolitan planning organization for transportation projects in the Bay Area. The contents of this document are governed by rules established by the U.S. Congress and implemented by the U.S. Department of Transportation. Among these rules are the maintenance of methods to forecast future travel demand, and plans that identify what can be built when financial constraints exist.

Solano Comprehensive Transportation Plan

Prepared by the Solano Transportation Authority, the *Solano Comprehensive Transportation Plan* is organized by modes of transportation. It contains separate elements to cover each mode: the Arterials, Highways, and Freeways Element; the Transit Element; and the Alternative Modes Element (for pedestrians and bicycles, as well as strategies for livable communities).

Solano-Napa Travel Demand Model

The Solano Transportation Authority maintains and updates a regional travel demand model. The model simulates travel demand within Solano County and its jurisdictions (based on regional projections of the viability of building scenarios for all the local general plans), in addition to demands for travel to and from adjacent counties. This model provides demand data for analysis of projected future growth countywide, as well as proposed transportation projects within the county.

Policies

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- TC.P-1: Maintain and improve current transportation systems to remedy safety and congestion issues, and establish specific actions to address these issues when they occur.
 - TC.P-2: In collaboration with other agencies and cities, continue to plan land uses that concentrate major employment and activity centers and services near transportation systems.
 - TC.P-3: Establish land use patterns that facilitate shorter travel distances and non-auto modes of travel, and limit the extent of additional transportation improvements and maintenance that may be needed with a more dispersed land use pattern.
 - TC.P-4: Evaluate proposals for new development for their compatibility with and potential effects on transportation systems.

- TC.P-5: Fairly attribute to each development the cost of on- and off-site improvements needed for state and county roads and other transportation systems to accommodate that development, including the potential use of development impact fees to generate revenue.
- TC.P-6: Participate in transportation programs that promote technical solutions resulting in more efficient use of energy, reduced greenhouse gas emissions and noise levels, and improved air quality.
- TC.P-7: Collaborate with other agencies and cities, continue to seek funding from federal, state, regional, or county agencies for major transportation projects and programs through transportation impact fees, private facilities and/or user tolls.
- TC.P-8: Actively participate with the California Department of Transportation, Solano Transportation Authority, cities, and other agencies to plan for any proposed future realignments of current interregional routes.
- TC.P-9: Plan, fund, build, and improve roadways that support agriculture by providing increased connectivity across Interstate 80, including the intersection at Pedrick Road, for farmers and their equipment, and by grading and paving unimproved rural roads.
- TC.P-10: Anticipate increases in vehicular traffic on rural roads that serve agricultural-tourist centers, value-added agricultural uses in the interior valleys, and other unique land uses; complete related roadway improvements that support the viability of such uses.

Implementation Programs

Funding, Physical Improvements, and Capital Projects

TC.I-1: Require the purchase of energy-efficient or alternative-fuel County vehicles when fleet upgrades occur.

Related Policies: TC.P-6, RS.P-49, RS.P-50, RS.P-51, RS.P-52, RS.P-54, RS.P-56

Agency/Department: All departments

Funding Source: General Fund

Time Frame: Ongoing

Development Review

TC.I-2: Promote development review and mitigation (including the use of transportation impact fees) that focuses on upgrading county roads to County design standards if the new development significantly contributes to the need to upgrade these roads, whether the new development occurs inside or outside of a city.

Related Policies: TC.P-5, TC.P-7

Agency/Department: Public Works; Department of Resource Management

Funding Source: Development fees

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach, and Education

TC.I-3: Support regular monitoring of the transportation system by the California Department of Transportation and the Solano Transportation Authority, with emphasis on studying congested areas to identify the cause, duration, and severity of the congestion, and potential traffic management solutions.

Related Policies: TC.P-1, TC.P-8, TC.P-10

Agency/Department: Public Works; Caltrans; Solano Transportation Authority

Funding Source: General Fund; federal and state funds

Time Frame: Ongoing

TC.I-4: Work with the Solano Transportation Agency to offer financing programs for the purchase or lease of vehicles used in employee ridesharing programs.

Related Policy: TC.P-6

Agency/Department: Public Works; Caltrans; Solano Transportation Authority

Funding Source: General Fund; federal and state funds

Time Frame: Ongoing

TC.I-5: In cooperation with the Solano Transportation Agency, provide public education about options for reducing motor vehicle-related greenhouse gas emissions. Include information on trip reduction, trip linking, public transit, biking and walking, vehicle performance and efficiency, low- and zero-emissions vehicles, and ridesharing.

Related Policy: TC.P-6

Agency/Department: Public Works; Solano Transportation Authority

Funding Source: General Fund

Time Frame: Ongoing

TC.I-6: Work with Solano Transportation Authority to create an online ridesharing program that matches potential carpoolers immediately.

Related Policy: TC.P-6

Agency/Department: Public Works; Solano Transportation Authority

Funding Source: General Fund

Time Frame: Ongoing

ROADWAYS

Planning Context

Interstate 80 near Fairfield



Roadways are the primary mode by which most persons and goods are transported in Solano County. Therefore, roadways need to be constructed appropriately to accommodate expected traffic volumes and adjacent land uses, while considering issues of safety, proper design, and accommodation.

Roadway Classifications

Roadway characteristics are described according to classifications used by Solano County, as listed below. In addition, the County applies specific road improvement standards to the design of new facilities. These standards describe in detail the various geometric requirements for both public and private roadways. Figure TC-1 presents the General Plan circulation diagram, depicting the locations of

current and planned future roadways and alternative travel routes within the county.

Local Roads. These roads are used primarily for access to residences, businesses, or other abutting properties. Ideally, these are paved roads with enough width to allow vehicles to operate in both directions. Local roads are identified on Figure TC-1.

Collector Roads. These roads link local and collector roads with arterials, freeways, and other collector roads. They usually have moderate but not congested volume.

Minor Arterial Roads. These roads provide a higher level of connectivity with the overall roadway system. They serve the same function as collectors but are intended to carry higher speeds of traffic. These typically will have signalized intersections with other minor arterials and more important roadways.

Major Arterial Roads. These roads, often with multiple lanes, provide the highest level of connectivity with local land uses. These facilities are usually controlled by signal operations with multiple phases. Several roadways are designated as major arterials as shown on Figure TC-1.

Freeways. Also known as superhighways in the County's *Road Improvement Standards and Land Development Requirements*, these facilities provide interregional connectivity and are designed for limited-access operation without any signalized controls. All roadway access is limited to ramps.

Solano County has four designated freeways that are operated and maintained by the California Department of Transportation (Caltrans):

- *I-80*—from the Contra Costa County line to Yolo County line—The major trunk route for Solano County, this freeway varies between three and four lanes in each direction.
- *I-505* from I-80 to the Yolo County line—This freeway, which has two lanes in each direction, connects Solano County with the northern Sacramento Valley and I-5.
- *I-680* from I-80 to the Contra Costa County line—This freeway connects Solano County with central Contra Costa County and points south. Between I-780 and I-80, the roadway has two lanes in each direction; the southernmost segment, the Benicia-Martinez Bridge, has three to four lanes in each direction.
- *I-780* from I-80 to I-680—This freeway segment between Vallejo and Benicia has two lanes in each direction.

In addition, portions of SR 37 and SR 12 in Solano County are currently designed to freeway or expressway standards, but these sections are not within the unincorporated area.

Solano County relies on the American Association of State Highway and Transportation Officials' *Policy on Geometric Design of Highways and Streets*.

Routes of Regional Significance. A Route of Regional Significance is a key roadway that meets most of the following criteria: it has significant traffic volume, it provides an important connection between cities and/or freeways and highways, it provides regional as well as local benefit, it serves as a frontage road or as a reliever route providing an alternative to the use of freeways and highways as a connection between cities, it provides access to significant job concentrations and transit centers in Solano County, it provides an improved emergency response route.

In addition to all State freeways and highways, there are a number of Solano County roads in unincorporated Solano County that have been identified as routes of regional significance. These represent Solano County's most significant roadways, and they will typically be the highest priority for improvement to accommodate the future growth of the County.

Design of Rural Roads

Design of rural roads must consider other challenges in addition to those of urban streets. Even though one lane of traffic in each direction may be sufficient, the specific lane widths and shoulder widths may need to be adjusted. Specific considerations are described below.

Use for farm equipment. Often, farm equipment must use rural roads to access different properties. Providing roads safe for use by farm equipment is one consideration that should be made when designing and improving these roadways. This consideration is especially important when connections over or under freeways are designed, because freeways and their rights-of-way often bisect properties owned by the same entity.

Transport of agricultural goods. By definition, agricultural activity results in the creation of goods that must be transported to markets, food processing locations, and other destinations. Generally these goods must be transported by truck using local rural roadways. Design considerations to anticipate this use are appropriate.

Relationship to drainage. Rural roadways must be designed to be sensitive to the flow of water through agricultural lands and environmentally sensitive areas. Drainage is of particular concern with any evacuation routes. Although all roadway designs should be attentive to drainage requirements, the issues in rural areas can be profound because of the often-changing nature of adjacent land activity.

Relationship to available right-of-way. Many rural roadways are constructed on corridors with limited right-of-way for lane or shoulder widening. Land development proposals should recognize that adjacent

rural roadways may need additional right-of-way, even if no additional traffic capacity is provided.

Traffic Congestion

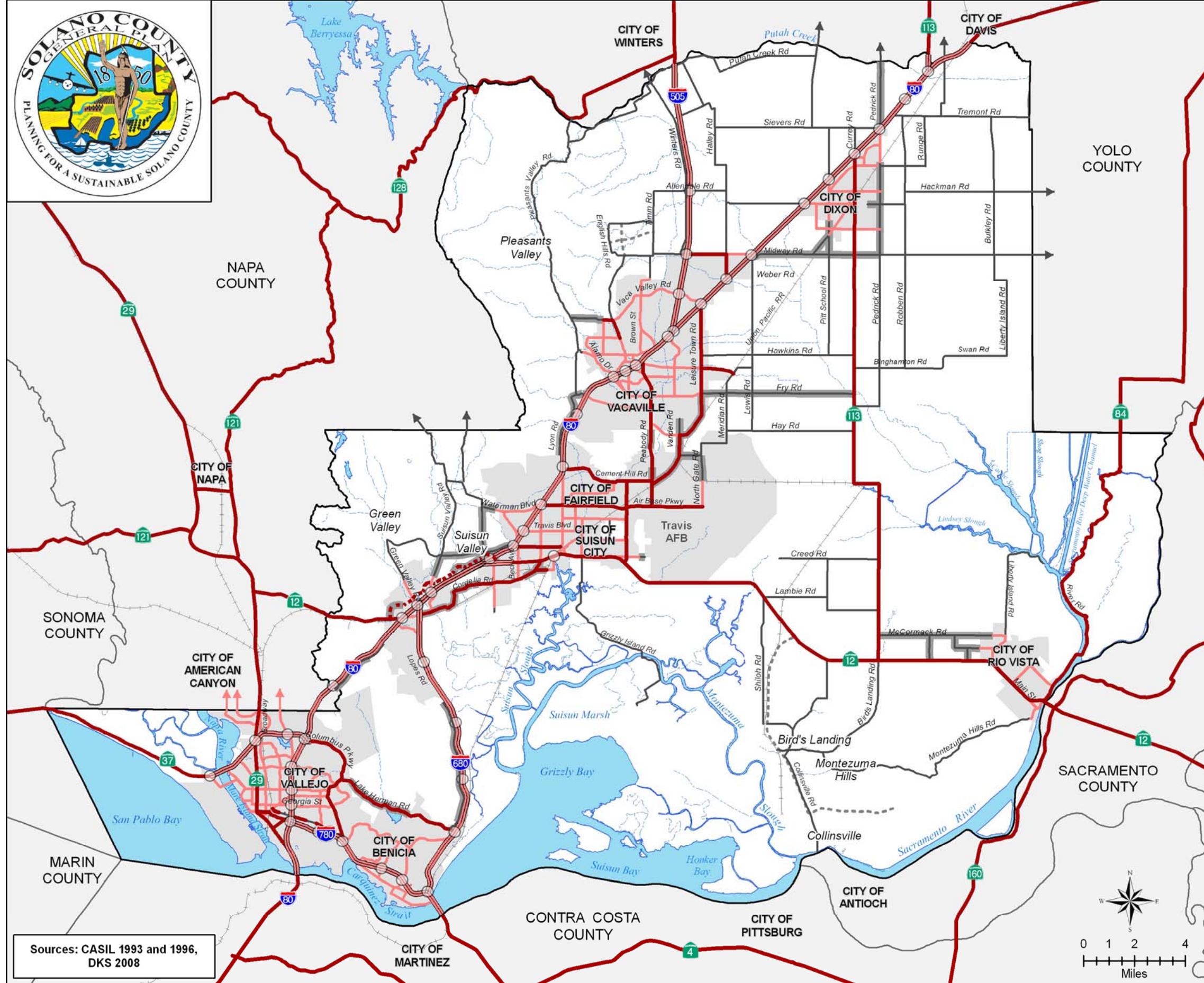
Roadway segment volumes indicate overall usage. When a facility's traffic volumes are compared to the facility's capacity, a relative level of congestion can be determined. "Level of service" is a term commonly used to quantify the experience of using roadways when the amount of additional traffic is considered. Level of service is also used as a planning tool to determine the deficiencies of highways in serving traffic volumes. According to the County's *Road Improvement Standards and Land Development Requirements* and the Caltrans *Highway Design Manual*, methods for determining roadways' levels of service are guided by the *Highway Capacity Manual* published by the Transportation Research Board.

The *Highway Capacity Manual* establishes six levels of service for highway facilities. These levels of service are designated "A" through "F," from best to worst, and cover the entire range of potential traffic operations. Each level of service includes a range of operating conditions based on travel speeds and the ratio of volume to capacity.

Solano County covers a wide area, and the land use changes anticipated in most of the unincorporated areas are small in comparison to those forecasted for nearby jurisdictions and counties. This means that the growth in traffic from cities within Solano County and in adjacent counties becomes the primary factor for anticipated increases in traffic volumes. Thus, increased traffic congestion is anticipated on freeways and major arterials that run through Solano County, regardless of the land use activities in the unincorporated portions of the county.

Interchanges

Most freeway interchanges in Solano County were designed and constructed in the 1950's and 1960's. In most cases, these interchanges do not meet current standards. In the future, it is likely that many of the interchanges will need substantial improvements to safely accommodate increasing traffic as the County continues to grow. These improvements may include widening, realigning and reconfiguring the interchange and the associated ramps. It may also involve realigning and improving the County roads in the vicinity. The scope and timing of these improvements will depend upon the rate of development in the County, including within the cities. Because of this, although improvements to these interchanges are anticipated, no specific improvements are shown in the General Plan or the Circulation Element.



Solano County General Plan
Figure TC-1
Roadway Diagram

Legend

- County Routes of Regional Significance
- Intersections
- Existing Roadways
- Freeway
- Major Arterial
- Minor Arterial
- Collector
- Planned Roadways
- Planned Major Arterial
- Planned Collector
- Basemap Layers
- Railroads
- Streams and Creeks
- Major Water Features
- Municipal Service Areas
- Adjacent Counties

"Planning for a Sustainable Solano County"

Limited Financial Resources for Improving Roadways

Many rural roadways within Solano County were built mainly to serve adjacent agricultural activity. Over time, population growth within nearby cities has resulted in increased traffic on these roads.

Improving roadways to address increased demand is an expensive undertaking. The undertaking is a greater problem in areas where there are no development plans for adjacent parcels and the traffic increases are a result of land use approvals granted by other jurisdictions. Improving roadways to the standards identified by Solano County will take years to achieve; financial strategies will continue to be needed, and priorities must be set for improving particular roads.

Thus, traffic in unincorporated Solano County will increase, but not primarily as a result of County actions. The County will work with local jurisdictions and regional funding agencies to ensure that traffic impacts to the County road system are fully addressed.

Policies

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|----------|--|
| TC.P-11: | Maintain and improve the current roadways and highway system to meet recommended design standards set forth by the County, including streets that also carry transit and nonmotorized traffic. |
| TC.P-12: | Maintain and improve the design of the current roadway system to serve areas where growth is desired and anticipated as identified in the General Plan Land Use Diagram, while minimizing conversion of agricultural and open space areas. |
| TC.P-13: | Designate and reserve adequate transportation right-of-way to meet projected traffic volumes, anticipating reasonable future demand. |

Implementation Programs

Regulations

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| TC.I-7: | Adopt road construction standards that account for flood hazards for public roads used as evacuation routes. |
|---------|--|

Related Policy: TC.P-11

Agency/Department: Department of Resource Management; Solano County Office of Emergency Services

Funding Source: Federal and state funds; General Fund

Time Frame: Ongoing

TC.I-8: Adopt road construction standards that account for the needs of pedestrians, bicyclists, and transit.

Related Policies: TC.P-15, TC.P-19, TC.P-24, TC.P-25, TC.P-26

Agency/Department: Public Works; Solano Transportation Authority

Funding Source: General Fund

Time Frame: Ongoing

Funding, Physical Improvements, and Capital Projects

TC.I-9: Maintain an inventory of roadway conditions and widths so that an upgrade and replacement program can be developed and implemented for these facilities.

Related Policies: TC.P-8, TC.P-11

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

TC.I-10: Prioritize, secure funding for, design, and build new roadways and complete roadway improvements using the established Capital Improvement Program process to implement the circulation system shown in the General Plan Circulation diagram (Figure TC-1). Ensure that future roadways meet design specifications and performance criteria for each roadway classification.

Related Policies: TC.P-8, TC.P-10, TC.P-12, TC.P-13

Agency/Department: Department of Resource Management

Funding Source: Determined and prioritized by Capital Improvement Program

Time Frame: Determined and prioritized by Capital Improvement Program

Development Review

TC.I-11: Review roadway widening needs on major county roadways when reviewing proposed new

developments to ensure that adequate right-of-way will be available.

Related Policy: TC.P-13

Agency/Department: Department of Resource Management

Funding Source: Development fees

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach, and Education

TC.I-12: Create a comprehensive plan of roadway improvements that support agricultural needs. The plan should include increased connectivity across Interstate 80 for farmers and their equipment, improvement of roads that serve agricultural-tourist centers in Suisun and other interior valleys, and grading and paving of unimproved rural roads that serve agricultural areas throughout the county. The plan should specifically address the Pedrick Road/Interstate 80 interchange area and additional roadway improvements needed to support the Limited Industrial area northeast of Dixon.

Related Policies: TC.P-9, TC.P-10

Agency/Department: Department of Resource Management; Agricultural Commissioner

Funding Source: General Fund; grant funds

Time Frame: Ongoing

BUS TRANSIT

Planning Context

Bus Transit Operations

Bus transit connects the County with surrounding areas



Fixed-route and bus transit service in Solano County is currently managed by several of the Solano County cities. Joint funding options and potential consolidation of some or all of these services are being considered.

Solano County should continue to rely on fixed-route transit and paratransit

operations provided by other jurisdictions or joint powers agencies. The population densities and patterns of unincorporated Solano County are not high enough to warrant consideration of a separate service operated and subsidized solely by the County.

Park-and-Ride Lots

Planning for express-bus service could also affect unincorporated Solano County by creating the need for park-and-ride facilities. Although current major lots are located within incorporated areas, future lots could be located near major roadway junctions in unincorporated Solano County.

Related Plans, Programs, and Policies

The Transit Element of the *Solano Comprehensive Transportation Plan* contains a summary of existing transit services and issues, and proposes a system of transit throughout Solano County using buses, ferries, and rail.

Policies

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- TC.P-14: Encourage the development of transit facilities and operations along major corridors to connect the county with surrounding activity centers and regional destinations.
 - TC.P-15: Promote the careful location and design of bus stops, transit centers, and complementary roadway projects that maximize the speed and productivity of fixed-route buses.
 - TC.P-16: Require major employment centers to facilitate the provision of adequate public transportation.
 - TC.P-17: Ensure that major retail centers and commercial and industrial centers with high levels of employment are served with adequate public transportation opportunities.

Implementation Programs

Funding, Physical Improvements, and Capital Projects

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- TC.I-13: Support development of transit facilities in strategic locations such as at interchanges and in areas of concentrated activity.
- Related Policies: TC.P-14, TC.P-19
- Agency/Department: Local transit operators; Department of Resource Management
- Funding Source: Federal and state funds
- Time Frame: Ongoing

TC.I-14:	Respond to transit operators' efforts when they propose changes to bus stop locations to improve rider safety or convenience, or to improve bus travel speeds or to improve paratransit services.
Related Policies:	TC.P-15, TC.P-19
Agency/Department:	Local transit operators; Department of Resource Management
Funding Source:	General Fund
Time Frame:	Ongoing

RAIL SERVICES

Planning Context

Rail service in Solano County is provided by several rail lines. One line is a primary Union Pacific line that carries substantial amounts of freight between Bay Area ports and the rest of the country. Other smaller and spur lines also exist.

In addition, an existing passenger-service rail line, operated by Amtrak, runs through Solano County. The trains on this line offer both regional connectivity (Capitol Corridor) and national connectivity (California Zephyr and Coast Starlight). Capitol Corridor operations have increased significantly since 1997, and studies and proposals to add railway stations in Solano County and add service on the line are under way.

This potentially affects the unincorporated portion of Solano County in several ways, as described below.

A Union Pacific train carries freight through Solano County.



Expansion of Rail Capacity. Because the rail corridor is already in high use for both freight and passenger service, there may be additional interest in adding tracks and possibly expanding the rail right-of-way.

Grade Separations. The proposal for additional rail service through the county will increase interest in constructing grade separations. The need for grade separations will depend on roadway volumes, train lengths and duration of blockage, and overall design and safety issues such as sight distance and speeds. New at-grade crossings of public roads are generally discouraged.

Compatibility with Surrounding Land Uses. Freight rail is often a mode that carries hazardous materials. The trains also sometimes move quickly and can be very difficult to stop. Land use proposals adjacent to rail tracks

should consider the needs of rail operations for safety, speed, and reliability.

Related Plans, Programs, and Policies

The Transit Element of the *Solano Comprehensive Transportation Plan* contains a summary of existing transit services and issues and proposes a system of transit throughout Solano County using buses, ferries, and rail.

Policy

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- TC.P-18: Encourage the expansion of passenger rail service through additional trains, new stations, and faster speeds to connect the county with other communities in the Bay Area and the Sacramento area.
- TC.P-19: Work with Solano Transportation Authority to develop strategies to remove barriers and increase commuter ridership on Amtrak passenger rail, including, but not limited to, collector bus services, bicycle and pedestrian routes to stations, bicycle parking facilities at stations, and promotional campaigns.

Implementation Programs

Funding, Physical Improvements, and Capital Projects

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- TC.I-15: Participate in programs to construct overpasses or underpasses at potentially dangerous and high-volume street locations that cross active railroad tracks.

Related Policy: TC.P-18

Agency/Department: Department of Resource Management

Funding Source: Federal and state funds

Time Frame: Ongoing

Coordination with Other Agencies and Organizations

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- TC.I-16: Support responsible improvements to track capacity so that both passenger and freight rail, including transportation of hazardous materials, can be operated without delays through Solano County.

Related Policies: TC.P-18, TC.P-19

Agency/Department: Department of Resource Management

Funding Source: Federal and state funds

Time Frame: Ongoing

TC.I-17: Support continued development of new train stations at Vacaville/Fairfield, Dixon, and Benicia to improve local access to regional rail service. Continue to support cities' efforts to locate higher density transit-oriented developments near the existing Capitol Corridor passenger rail line. Support improved rail access for Travis Air Force Base and Mare Island.

Related Policies: TC.P-18, TC.P-19

Agency/Department: Board of Supervisors; Department of Resource Management; Public Works

Funding Source: General Fund; federal and state funds

Time Frame: Ongoing

AIR TRANSPORTATION

Planning Context

Aircraft operations must be considered in the effort to promote safety at land uses near aviation facilities.

General-Aviation Airports

Solano County residents have access to general-aviation airports in Vacaville (Nut Tree) and Rio Vista. The Nut Tree Airport is operated by the County, while the Rio Vista Airport is operated by the City of Rio Vista. Activity at both airports promotes access to Solano County from other parts of the country. Planning for runways, hangars, parking, and landside services should be led by the airport operators, but considerations of nearby land uses should be made through dialogue with airport operators.

Travis Air Force Base

Travis Air Force Base is located in Solano County. This base is an important housing and employment provider for the county, and military aircraft activity occurs regularly at the base. Planning for airport facilities will continue to be performed by the U.S. Air Force, but the County should facilitate the safe operation of aircraft into and out of the base. There are currently no plans to open the operation as a shared-use facility.

If the roles of Travis Air Force Base change to encourage a shared-use agreement, the County should work with the Air Force and cities to determine the feasibility and appropriateness of future uses.

Policies

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- TC.P-20: Support the continued safe operation of current general-aviation airports and heliports and encourage complementary land uses near such facilities.
- TC.P-21: Monitor the potential for a joint-use agreement with Travis Air Force Base to provide for future development of improved local options for commercial aviation. If the status of the base changes, the construction of nonmilitary airport and support uses may be permitted.

Implementation Programs

Regulations

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- TC.I-18: Apply appropriate site planning practices and development standards in areas near general-aviation airports and heliports so that aircraft are not disturbed by nearby buildings, overhead wires, cell phone towers, or other possible obstructions.

Related Policy: TC.P-20

Agency/Department: Department of Resource Management

Funding Source: Development fees

Time Frame: Ongoing

-
- TC.I-19: Discourage residential land uses near general-aviation airports and heliports so that residents will not be disturbed by aircraft noise.

Related Policy: TC.P-20

Agency/Department: Department of Resource Management

Funding Source: Development fees

Time Frame: Ongoing

PORT FACILITIES AND FERRIES

Planning Context

There are currently no deepwater port operations within unincorporated Solano County, although deep water access is available near Collinsville. A retired port facility exists on Mare Island, in City of Vallejo and has the potential for future reuse. The creation or reuse of a port to carry deepwater vessels would require further detailed studies of the economic, traffic, and environmental effects on surrounding water and land uses.



Ferries connecting Vallejo to San Francisco provide non-motorized commuting options for Solano County residents.

the

Ships regularly operate in the Sacramento River and Carquinez Strait between deepwater ports in other counties. Operation of these ships could potentially result in damage to levees or even environmental hazards from ship accidents.

Passenger service is available at the Vallejo Ferry Terminal, connecting Solano County to San Francisco from the Vallejo Ferry Terminal.

Policy

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| TC.P-22: | Continue to examine the potential for development of deepwater port facilities to support industrial and commercial uses, where compatible with surrounding land uses and the adjacent land-based transportation system. |
| TC.P-23: | Evaluate and monitor the effects of water transportation and port activity on the levee system. |

Implementation Program

Coordination with Other Agencies and Organizations

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- | | |
|--|---|
| TC.I-20: | Encourage the use of water transportation when industrial and commercial uses are proposed near deepwater channels. |
| Related Policy: | TC.P-22 |
| Agency/Department: Department of Resource Management | |
| Funding Source: Development fees | |

Time Frame: Ongoing

NONMOTORIZED FACILITIES

Planning Context

Pedestrian Facilities

Because implementation and maintenance of pedestrian-oriented projects will continue to be important, Solano County will continue to work with other jurisdictions to provide safe travel corridors for pedestrians. Much of the planning and funding for bicycle and pedestrian facilities will involve coordination between the County, regional agencies, school districts, and park and natural resource agencies.

Pedestrian facilities take many forms, including those described below.

Sidewalks and Trails. These facilities are designed to provide an exclusive corridor for pedestrians to use. Generally, sidewalks are located adjacent to roadways, while trails are designed to provide recreational experiences separated from motorized travel.

Pedestrian Crossings. These facilities are locations where markings and/or signs are used to provide pedestrians with an opportunity to safely cross roadways. Pedestrian crossings are important parts of recreational trail systems that cross roadways, and for locations where pedestrian activity is regularly occurring (such as near schools).

Bicycle Facilities

Bicycle facilities are generally classified as Class I, II, or III according to the Caltrans *Highway Design Manual*, as referenced in the County's *Road Improvement Standards and Land Development Requirements*. The definitions of each class are as follows:

- **Class I facilities (bike path)**—a completely separated facility and right-of-way (shared with pedestrians) that excludes general motor vehicle traffic.
- **Class II facilities (bike lane)**—a striped lane for one-way bike travel on a roadway.
- **Class III facilities (bike route)**—a facility that has shared use with pedestrian or motor vehicle traffic. It is typically a street with low traffic volumes and speeds, with measures or preferential bike treatment.

Bicycle paths, bicycle lanes, sidewalks, and pedestrian trails will need to be considered where the countywide plans suggest that projects are warranted. Specific corridor issues such as pavement widths and

conditions, rights-of-way, and other design considerations may need to be identified in County implementation policies and design standards.

Related Plans, Programs, and Policies

Solano Countywide Pedestrian Plan

The *Solano Countywide Pedestrian Plan*, maintained and updated by the Solano Transportation Authority, contains generalized guidance on providing sidewalks, pedestrian paths and trails, and crossings.

Solano Countywide Bicycle Plan

The *Solano Countywide Bicycle Plan*, also maintained and updated by the Solano Transportation Authority, summarizes a countywide bicycle system and establishes anticipated costs, funding requirements, and priorities for implementing and maintaining a system.

Policies

-
- | | |
|----------|--|
| TC.P-24: | In collaboration with other agencies and cities, continue to plan, design, and create additional bikeways and bikeway connections to provide intercity and intercounty access and incorporate system needs when approving adjacent developments. |
| TC.P-25: | Encourage access to open space and recreation through the development of safe, convenient, and connected walking paths, trails, bikeways, and neighborhood-based parks and recreation options. |
| TC.P-26: | Accommodate pedestrians and bicyclists in the design and construction of roadway improvements on County facilities. |

Implementation Programs

Funding, Physical Improvements, and Capital Projects

-
- | | |
|----------|--|
| TC.I-21: | Design, construct, and maintain bicycle routes as described in the Countywide Pedestrian and Bicycle Plan and ensure that adequate signs and pavement markings are provided. |
|----------|--|

Related Policy: TC.P-24

Agency/Department: Department of Resource Management

Funding Source: Determined and prioritized by Capital Improvement Program

Transportation and Circulation Chapter

Time Frame: Determined and prioritized by Capital Improvement Program

TC.I-22: Pursue roadway-improvement project funding to complete bicycle path linkages between Solano County communities.

Related Policy: TC.P-24

Agency/Department: Department of Resource Management

Funding Source: Grant funds; General Fund

Time Frame: Determined and prioritized by Capital Improvement Program

TC.I-23: Support applications to fund new bicycle and pedestrian facilities that close gaps in the system.

Related Policy: TC.P-24

Agency/Department: Department of Resource Management

Funding Source: Determined and prioritized by Capital Improvement Program

Time Frame: Determined and prioritized by Capital Improvement Program

TC.I-24: Ensure that funding priorities for investment in transportation system improvements are consistent with the land use and economic development goals and policies of the General Plan, especially as these relate to transit-supportive development and are consistent with the Regional Transportation Plan.

Related Policies: TC.P-24, TC.P-25, TC.P-26

Agency/Department: Department of Resource Management

Funding Source: Determined and prioritized by Capital Improvement Program

Time Frame: Determined and prioritized by Capital Improvement Program

Development Review

TC.I-25: Require projects to facilitate bicycle and walking access when feasible. Adopt development

standards and design guidelines that support such access.

Related Policy: TC.P-25

Agency/Department: Department of Resource Management

Funding Source: Determined and prioritized by Capital Improvement Program

Time Frame: Determined and prioritized by Capital Improvement Program

TC.I-26: Ensure that nonmotorized transportation systems are interconnected and include amenities such as secure bicycle parking.

Related Policies: TC.P-24, TC.P-25, TC.P-26

Agency/Department: Department of Resource Management

Funding Source: Project Applicant

Time Frame: Determined and prioritized by Capital Improvement Program

Ongoing Planning Efforts, Public Outreach, and Education

TC.I-27: Continue to participate in the Safe Routes to School program.

Related Policy: TC.P-25

Agency/Department: Department of Resource Management

Funding Source: Determined and prioritized by Capital Improvement Program

Time Frame: Determined and prioritized by Capital Improvement Program

"Planning for a Sustainable Solano County"

Transportation and Circulation Chapter

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CHAPTER

8 PUBLIC FACILITIES AND SERVICES

INTRODUCTION

Public facilities and services cover a wide range of public and quasi-public institutions and activities. The County recognizes that it is responsible for providing and maintaining certain facilities and services necessary to maintain a safe, satisfying living environment for its rural residents. These include police and fire protection, libraries, and public facilities such as road and drainage improvements. County government is not structured to provide the level of services and facilities needed to serve more intensive urban development typical in cities. Many services provided in the unincorporated county are provided by independent special districts, such as fire protection and water service in some areas, or by private companies such as garbage service.

As with all of the chapters of the *Solano County General Plan*, this Public Facilities and Services chapter establishes goals and policies for envisioning the future of Solano County. These are based on the Community Vision, which states in part:

We will focus on creative and innovative solutions to meet both human needs and the needs of the natural environment.

We will support practices that use renewable and recycled resources and reduce energy consumption and pollution as much as possible.

...we will support access to opportunities so that individuals may thrive.

We will provide our citizens with an opportunity to succeed through quality education, skills training, and lifelong learning.

We will promote access to civic culture and the arts as part of a healthy community. We will also seek fiscal responsibility in our

government while supporting a wide range of public services that make Solano County a desirable place to live.

Based on the themes of environment, economy, and equity found in the vision statement, the following major themes are addressed in this chapter:

- protecting the environment through the manner by which sewer, wastewater, and solid waste facilities and services are provided;
- supporting the economy with infrastructure for commercial and industrial uses; and
- promoting equity through access to community facilities and services, and through the provision of responsive law enforcement and emergency services.

This Public Facilities and Services chapter provides information and policy guidance to Solano County to ensure that adequate public facilities and services are available now and in the future. The goal of this chapter is to set a framework for the County to serve existing residents in the unincorporated county and future development.

Purpose

State law requires that some of the topics addressed in this chapter be discussed in the General Plan. Specifically, state guidelines for preparing general plans suggest that the Circulation Element is intended to address circulation of people, goods, energy, water, sewage, and communications. Solano County has chosen to separate the discussion of public facilities and services in this chapter from the discussion of circulation of people and goods included in the Transportation and Circulation chapter.

Solano County includes this chapter because public facilities and services such as utilities, water services, sewer and wastewater, and law enforcement support existing and future development, as described in the Land Use chapter. These services are essential for the County to achieve its vision, while maintaining its foundation in the environment, the economy, and equity.

Scope and Content

This chapter is organized into several topics:

- General,
- Water Facilities and Service,
- Sewer and Wastewater,
- Solid Waste,
- Drainage,
- Fire Protection and Emergency Services,
- Law Enforcement,
- Public Education,

- Community Facilities, and
- Utilities.

Each section in this chapter is organized into three parts: the planning context, policy statements, and implementation programs to act on the policies.

Relationship to Other General Plan Chapters

The issues and topics discussed in this Public Facilities and Services chapter are closely related to those discussed within other chapters of the General Plan. The Drainage section of this chapter is directly related to the Flood Control section of the Public Health and Safety chapter, which focuses on reducing hazards related to flooding. The Fire Protection and Emergency services section is directly related to the Public Health and Safety chapter. The issues that pertain to the Land Use chapter of the General Plan include the lands to be set aside for community facilities, parks, and other recreational opportunities. The relationships between this chapter and other chapters provide a solid structure for integrating planning efforts into the future.

GOALS

As stated previously, this chapter provides Solano County with a framework for serving its residents with adequate public facilities and services. The following goals reinforce the County's commitment to providing adequate services to the community now and in the future. The facilities and services provided by the County contribute to the quality of life for all Solano County residents. They address the previously stated themes of:

- protecting the environment through the manner by which sewer, wastewater, and solid waste facilities and services are provided;
- supporting the economy with infrastructure for commercial and industrial uses; and
- promoting equity through access to community facilities and services, and through the provision of responsive law enforcement and emergency services.

PF.G-1:	Provide adequate public services and facilities to accommodate the level of development planned by the County.
PF.G-2:	Ensure that residents throughout Solano County have access to essential public facilities and services.
PF.G-3:	Provide effective and responsive fire and police protection, and emergency response service.

GENERAL

This section addresses the policies that apply to all types of services and facilities. Solano County strives to provide a number of valuable public facilities and services. In doing so, the County must be responsive to local needs and to the principles found within the vision statement—the environment, the economy, and equity. To address local needs, the County will provide facilities and services that promote health, safety, and welfare. The County will enhance environmental stewardship by ensuring that new facilities are located near or within established communities, to foster cluster development, and to take advantage of existing infrastructure. The County will address economic concerns by requiring that new development and redevelopment pay their fair share of infrastructure and public service costs. Lastly, the County will promote equity by strategically locating new facilities to maximize use and to provide equal access and opportunity for all residents in the unincorporated county.

Policies

-
- PF.P-1: Provide public facilities and services essential for health, safety, and welfare in locations to serve local needs.
 - PF.P-2: Require new development and redevelopment to pay its fair share of infrastructure and public service costs.
 - PF.P-3: Increase efficiency of water, wastewater, stormwater, and energy use through integrated and cost-effective design and technology standards for new development and redevelopment.
 - PF.P-4: Ensure that adequate land is set aside within the unincorporated county for public facilities to support future needs.
 - PF.P-5: Design and locate new development to maximize the use of existing facilities and services and to coordinate with the cities the need for additional County services.
 - PF.P-6: Guide development requiring urban services to locations within and adjacent to cities.
 - PF.P-7: Coordinate with the cities to strongly encourage compact urban development within city urban growth areas to avoid unnecessary extension or reconstruction of roads, water mains, and services and to reduce the need for increased school, police, fire, and other public facilities and services.
 - PF.P-8: Notify the appropriate agencies (e.g., school districts, public safety, water) of new development applications

within their service area early in the review process to allow sufficient time to assess impacts on facilities.

Implementation Programs

Funding, Physical Improvements, and Capital Projects

PF.I-1:	Use the County's Capital Improvement Program to identify, plan, and provide for future public facilities and improvements. Capital Improvement Program projects shall be reviewed annually for consistency with General Plan policies and coordinated with current and future development.
Related Policies:	PF.P-4, PF.P-1, PF.P-17
Agency/Department:	Department of Resource Management and Department of General Services
Funding Source:	General Fund
Time Frame:	Ongoing
PF.I-2:	Investigate the feasibility of additional funding mechanisms (such as a CFD) to provide fire, EMS, and other services to unincorporated areas, including rural north Vacaville area, unincorporated areas around the City of Fairfield, and City of Dixon.
Related Policies:	PF.P-1, PF.P-2, PF.P-5
Agency/Department:	Department of Resource Management
Funding Source:	General Fund
Time Frame:	Ongoing
PF.I-3:	Review the County's current development fee schedule and revise it as necessary to ensure that the development fees reflect the facility improvements necessary to implement the General Plan and provide adequate levels of service. Storm drainage, roadways and transportation, parks, fire protection, law enforcement, libraries, and other fees should be considered.
Related Policies:	PF.P-2, PF.P-8, TC.P-5
Agency/Department:	Department of Resource Management
Funding Source:	General Fund

Time Frame: Ongoing

Development Review

PF.I-4: Evaluate the level of services and funding needs of the various agencies and districts that will provide public facilities and services during project review to ensure that adequate levels of service are provided and facilities are maintained.

Related Policies: PF.P-7, PF.P-8

Agency/Department: Department of Resource Management and local service agencies

Funding Source: General Fund

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach, and Education

PF.I-5: Work with the owners and operators of methane-producing facilities (e.g., landfills, dairies, wastewater treatment plants) to establish methane recovery and electricity generation systems.

Related Policy: PF.P-3

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Coordination with Other Agencies and Organizations

PF.I-6: Coordinate with the cities and the Solano County Local Area Formation Commission to ensure that urban development in areas included within the cities' municipal service area are served by a full range of urban services (e.g., public water and sewer, public transit, safety and emergency response services, parks, trails, open spaces) through city annexation.

Related Policies: PF.P-5, PF.P-1, PF.P-6, PF.P-17

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

WATER FACILITIES AND SERVICE

Planning Context

Water service, a basic necessity, is provided to residences, businesses, farms, and municipal institutions by various agencies within Solano County. The availability of water service depends on the federal, state, and County agencies that own, operate, and maintain a complex system of infrastructure. Water infrastructure traditionally includes facilities such as aqueducts, dams, treatment plants, miles of water pipeline, and wells.

Solano County has a number of water providers, districts, and sources. Solano County Water Agency delivers untreated water from the Solano Project (a project that includes Monticello Dam and Lake Berryessa) and the North Bay Aqueduct (a State Water Project facility). The Solano County Water Agency provides water for municipal, industrial, and agricultural uses in Fairfield, Suisun City, Vacaville, Vallejo, Benicia, the Solano Irrigation District and Maine Prairie Water District service areas, UC Davis, and the California State Prison in Solano County. Agricultural users in the Solano Irrigation District service area use surface water and groundwater; those in the Maine Prairie Water District service area and Reclamation District 2068 use surface water only. Other water sources in the unincorporated county are the Rural North Vacaville Water District, the City of Vallejo, Suisun-Solano Water Authority, and private and community wells. Additionally, some wastewater from the Fairfield/Suisun area is recycled and used for agricultural purposes.

The Suisun-Solano Water Authority is a joint powers authority with Suisun City and the Solano Irrigation District. It provides domestic water to users in Suisun City and the Tolonas unincorporated community. The City handles billing and service requests and the district delivers the water.

Drinking water treatment services in Solano County are provided by seven water treatment facilities: Vacaville's Diatomaceous Earth Plant (DE Plant), Vacaville and Fairfield's North Bay Regional Water Treatment Plant (NBR Plant), Fairfield's Waterman Treatment Plant, the Suisun-Solano Water Authority's Cement-Hill Water Treatment Plant, Vallejo's Green Valley and Fleming Hill Treatment Plants, and Benicia's water treatment plant. Rio Vista and Dixon are served by groundwater well systems. Vacaville is served via a combination of groundwater wells and water treatment facilities (DE Plant and NBR Plant). Travis Air Force Base receives treated water from the City of Vallejo.

SCWA has expressed concerns about water shortages during drought years because the State Water Project supply is not reliable during such years. Long drought can cause draw down of Lake Berryessa storage levels and lowering of groundwater levels.

Related Plans, Programs, and Agencies

Solano County Water Agency

Solano County Water Agency (SCWA) was established in 1951 to provide untreated water to water service agencies in Solano County from the federal Solano Project and the North Bay Aqueduct of the State Water Project. SCWA operates the Solano Project, which delivers water from Lake Berryessa to four of Solano's cities and the Maine Prairie Water District.

Solano Project

The Solano Project is a federal project designed to provide water for drinking and agricultural purposes. Putah Creek is the project's source, and it is stored behind the Monticello Dam, forming Lake Berryessa.

State Water Project

The State Water Project provides water from the Feather River watershed and from the delta to water agencies around the state. It is one of the primary sources of water to SCWA.

Division of Environmental Health

The Department of Resource Management Division of Environmental Health administers and enforces federal, state, and local laws and policies relating to consumer oriented facilities, water systems and waste disposal, and activities involving hazardous materials. As part of their Technical Services Program, the division regulates small public water systems.

Policies

-
- PF.P-9: Actively support efforts of the Solano County Water Agency, water districts, and regional water suppliers and distributors, to ensure that adequate high-quality water supplies are available to support current and future development projects in Solano County.
- PF.P-10: Maintain an adequate water supply by promoting water conservation and development of additional cost-effective water sources that do not result in environmental damage.
- PF.P-11: Promote and model practices to improve the efficiency of water use, including the use of water-efficient landscaping, beneficial reuse of treated wastewater, rainwater harvesting, and water-conserving appliances and plumbing fixtures.

- PF.P-12: Protect the county's public water supply and delivery infrastructure from natural disasters or acts of terrorism.
- PF.P-13: Support efforts by irrigation districts and others to expand Solano County's irrigated agricultural areas.
- PF.P-14: In areas identified with marginal water supplies, require appropriate evidence of adequate water supply and recharge to support proposed development and water recharge.
- PF.P-15: Domestic water for rural development shall be provided through the use of on-site individual wells or through public water service.
- PF.P-16: Provide and manage public water service through public water agencies.
- PF.P-17: Limit public water infrastructure to developed areas or those designated for future development to prevent growth-inducing impacts on adjoining agricultural or open space lands.
- PF.P-18: The minimum lot size for properties to be served by individual on site wells and individual on site sewage disposal systems shall be five acres. Where cluster development is proposed with on site wells and sewage disposal systems, parcels may vary in size provided the overall density of the project is not greater than five acres per parcel and that no individual parcel is less than one acre in size.
- PF.P-19: The minimum lot size for properties to be served by public water service with individual on site sewage disposal systems shall be 2.5 acres. Where cluster development is proposed with public water service and on site sewage disposal systems, parcels may vary in size provided the overall density of the project is not greater 2.5 acres per parcel and that no individual parcel is less than one acre in size.
- PF.P-20: Minimize the consumption of water in all new development.

Implementation Programs

Regulations

-
- PF.I-7: Maintain the Zoning Ordinance to specify minimum lot sizes for properties with on-site sewage and on-site wells.

Public Facilities and Services Chapter

Related Policies: PF.P-18, PF.P-19

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

PF.I-8: Implement the recommendations from the *English Hills Specific Plan Groundwater Investigation* establishing minimum parcel sizes to ensure adequate groundwater supply and recharge for the English Hills area.

Related Policy: PF.P-9

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

PF.I-9: Adopt ordinances that require the use of water-efficient landscaping, water-conserving appliances and plumbing fixtures.

Related Policy: PF.P-20

Agency/Department: Department of Resource Management; Solano County Water Agency

Funding Source: General Fund

Time Frame: Ongoing

Funding, Physical Improvements, and Capital Projects

PF.I-10: Seek federal funds or grants to ensure protection of the County's public water supply and delivery infrastructure from natural disasters or acts of terrorism. Use these funds to develop a program to reduce such risks.

Related Policy: PF.P-12

Agency/Department: Department of Resource Management; Solano County Water Agency

Funding Source: General Fund

Time Frame: Ongoing

Development Review

PF.I-11:	Continue to require preparation of a water supply assessment pursuant to the California Water Code to analyze the ability of water supplies to meet the needs of regulated projects, in the context of existing and planned future water demands. Review the availability of water to serve new developments in the unincorporated area before permitting such developments and ensure that the approval of new developments will not have a substantial adverse impact on water supplies for existing water users.
Related Policies:	PF.P-9, PF.P-14
Agency/Department:	Department of Resource Management
Funding Source:	General Fund
Time Frame:	Ongoing
PF.I-12:	Continue to work with water suppliers to ensure adequate future water supply and delivery. Review development proposals and require necessary studies, as appropriate, and water conservation and mitigation measures to ensure adequate water service.
Related Policies:	PF.P-9, PF.P-17
Agency/Department:	Department of Resource Management
Funding Source:	General Fund
Time Frame:	Ongoing
PF.I-13:	Require new development proposing on-site water supplies in areas identified with marginal water supplies to perform a hydrologic assessment to determine whether project plans meet the County's hydrologic standards.
Related Policies:	PF.P-9, PF.P-11, PF.P-14.
Agency/Department:	Department of Resource Management
Funding Source:	General Fund
Time Frame:	Ongoing

PF.I-14: Review plans for new development projects to ensure that they have provided for water on-site or through a public agency.

Related Policies: PF.P-15, PF.P-16

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach, and Education

PF.I-15: Investigate the potential for innovative recycled water systems in Solano County, such as the use of greywater for domestic and agricultural purposes, and identify sources of funding for implementation of these systems.

Related Policies: PF.P-3, PF.P-9, PF.P-11, PF.P-12

Agency/Department: Solano County Water Agency; Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

PF.I-16: Encourage water agencies to require water efficiency training and certification for landscape irrigation designers and installers, and property managers. Work with local partners and water suppliers to educate the public about water conservation options, including landscaping, irrigation, low-water appliances, and other measures the public can take to reduce water use. Encourage water suppliers to provide incentives for customers that use water more efficiently.

Related Policy: PF.P-11

Agency/Department: Solano County Water Agency; Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

PF.I-17: Assess water use in County-operated facilities and implement programs for efficient water use and wastewater reuse. Implement water conservation

programs as defined by state law and develop new measures in response to community input and changing technology.

Related Policy: PF.P-11

Agency/Department: Department of General Services

Funding Source: General Fund

Time Frame: Ongoing

Coordination with Other Agencies and Organizations

PF.I-18: Encourage and assist water suppliers in providing incentives to encourage water conservation or reuse.

Related Policies: PF.P-3, PF.P-9, PF.P-11, PF.P-12

Agency/Department: Solano County Water Agency; Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

PF.I-19: Cooperate with water suppliers to accomplish the following:

- plan for and coordinate response to future water supply emergencies and droughts;
- develop and implement measures to protect water quality at the source; and
- maintain and expand water supply through acquisition of new sources.

Related Policy: PF.P-9

Agency/Department: Solano County Water Agency; Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

PF.I-20: Develop an information sharing program in cooperation with public water suppliers as necessary to make appropriate data available to

the public pertaining to water supply and water use in each supplier's jurisdiction.

Related Policy: PF.P-9

Agency/Department: Department of Resource Management; Solano County Water Agency

Funding Source: General Fund

Time Frame: Ongoing

PF.I-21: Cooperate with the Solano County Water Agency in the implementation of its Integrated Regional Water Management Plan and support the efforts of the Solano County Water Agency to maintain adequate water supply and high water quality. Help the Solano County Water Agency to improve water demand projections and planning. This could include updating the Urban Water Management Plan with population projections as found in the updated general plans of cities and the County.

Related Policies: PF.P-9, PF.P-10

Agency/Department: Department of Resource Management; Solano County Water Agency

Funding Source: General Fund

Time Frame: Ongoing

SEWER AND WASTEWATER

Planning Context

Sewer and wastewater services include underground sewer pipes to transfer wastewater from kitchen and bathroom sinks, showers, and toilets to a sewage facility for treatment. Wastewater treatment plants are designed to implement a specific level of water treatment, dependent on the desired end use of the water. For large, rural counties such as Solano County, sewer and wastewater services in the unincorporated areas serving rural development are expensive to provide.

Each of the cities in Solano County—Benicia, Dixon, Fairfield, Rio Vista, Suisun, Vacaville, and Vallejo—is currently served by municipal sewer and wastewater systems. Some parcels in the unincorporated county near cities are served by sewer and wastewater services from adjacent cities and sewer districts. The City of Vacaville serves the unincorporated community of Elmira, which is adjacent to the service area for the Vacaville sewer system. The Suisun-Fairfield Sewer District provides sewer

service to the unincorporated community of Cordelia and parts of Suisun Valley from Rockville Road south to the Fairfield city limits. The Vallejo Sanitation and Flood Control District provides sewer service to the Vallejo unincorporated islands. The City of Dixon provides service to a few parcels directly outside of Dixon.

A few of the larger developments in the unincorporated county have small treatment systems. The Twin Creeks Condominium Project in Green Valley and the recreational vehicle parks within the county have small treatment systems that serve multiple ownerships and users.

The majority of developments in the unincorporated county, those not served by municipal sewer or small-scale treatment systems, operate stand-alone septic tanks. Water treatment using a septic system depends on gravity to move sewage effluent through the soil, where the effluent is treated by the biological activity in the soil. Some properties also employ either an aerobic treatment unit or a sand filter, or both, to assist in treatment. A permit is required in Solano County to install, repair, or modify a septic system. Under this permitting system, records are kept for all septic tanks within the county. Problems with septic systems have been reported when heavy rains saturate the soil and the systems' leaching mechanisms do not operate at full capacity, potentially releasing raw sewage. Untreated sewage on the ground can lead to increased human exposure, adverse health affects, and groundwater pollution.

Related Plans, Programs, and Agencies

Regional Water Quality Control Boards

The Regional Water Quality Control Boards (RWQCBs) are local divisions of the State Water Resources Control Board. Solano County in the jurisdiction of two RWQCBs: the San Francisco Bay RWQCB in the western county and the Central Valley RWQCB in the east (see Figure PF-1). The State Water Resources Control Board was created in 1967 to allocate water resources and to protect water quality. The mission of the Regional Boards is to develop and enforce water quality objectives and implementation plans to best protect the state's waters, recognizing local differences in climate, topography, geology, and hydrology.

Policies

-
- PF.P-21: Sewer services for development within the unincorporated area may be provided through private individual on-site sewage disposal systems, or centralized community treatment systems managed by a public agency utilizing the best systems available that meet tertiary treatment or higher standards. Use of such centralized sewage treatment systems shall be limited to: (1) existing developed areas, (2) areas designated for commercial or industrial uses, or (3) areas designated for rural residential

development when part of a specific plan or policy plan overlay.

PF.P-22: Ensure that new and existing septic systems and sewage treatment systems do not negatively affect groundwater quality.

Implementation Programs

Regulations

PF.I-22: Review and revise the County Code to ensure it incorporates current best practices to minimize the impacts of on-site septic systems and sewage treatment systems. This revision should address standards within chapters 6.4, 12.2, 13.10, 26, 28, and 31 of the County code.

Related Policies: PF.P-21, PF.P-22

Agency/Department: Department of Resource Management

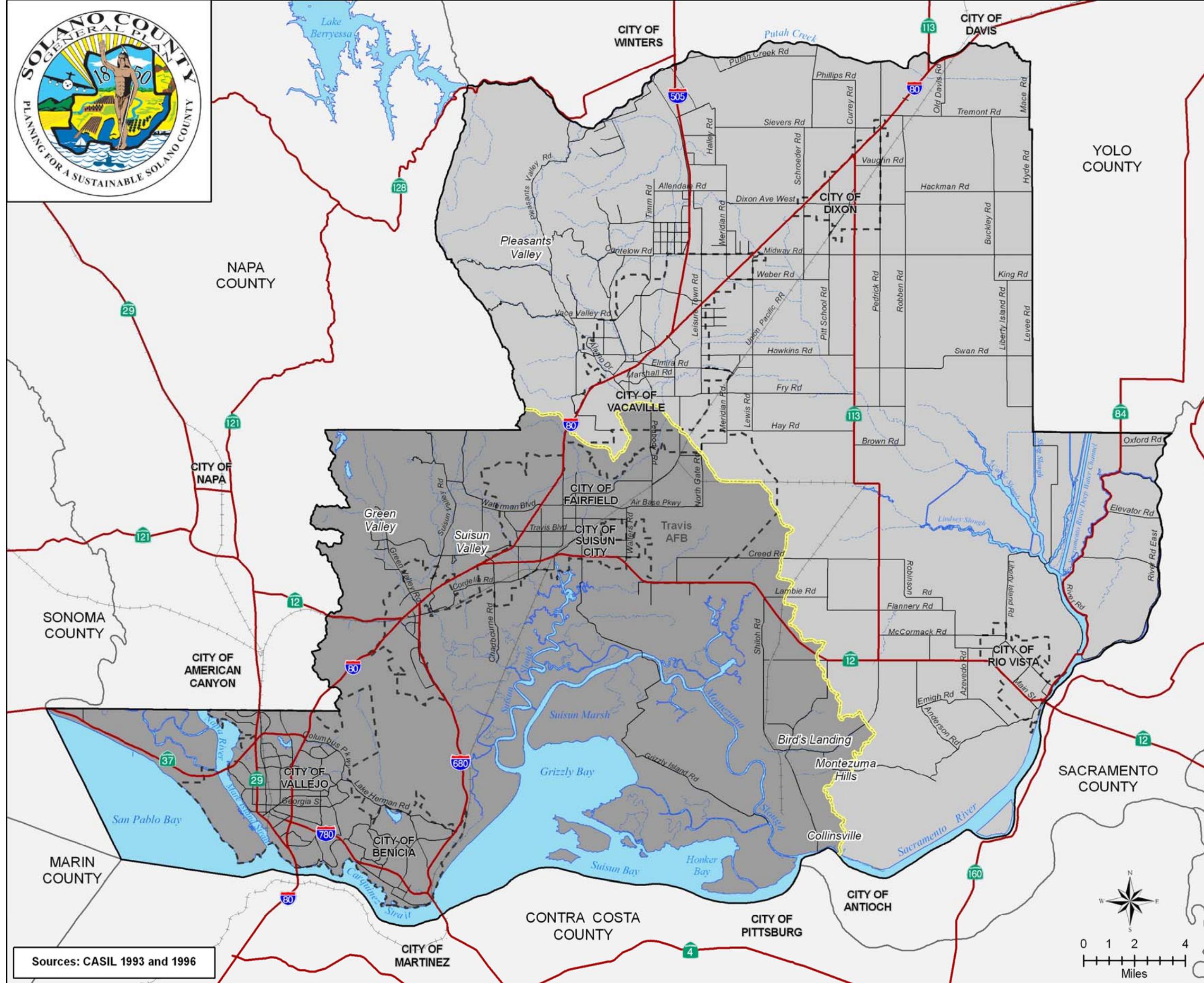
Funding Source: General Fund

Time Frame: By 2011

Development Review

PF.I-23: When reviewing development proposals,

- Require septic systems to be located outside of primary groundwater recharge areas, or where that is not possible, require shallow leaching systems for disposal of septic effluent.
- Require new septic systems or leach fields to be installed at least 100 feet away from natural waterways, including perennial or intermittent streams, seasonal water channels, and natural bodies of standing water. Make an exception for the repair of existing systems if the 100 foot setback area cannot be maintained and if adequate provisions are made for protecting water quality.
- Require the use of alternative wastewater treatment techniques to respond to site characteristics, as determined by the California Department of Health Services and regional water quality control boards.



Solano County General Plan
Figure PF-1
Regional Water Quality Control Boards

Legend

Regional Water Quality Control Boards (RWQCBs)

Central Valley RWQCB

San Francisco Bay RWQCB

RWQCB Basin Division Boundary

Basemap Layers

Roadways

Highways

Railroads

Streams and Creeks

Major Water Features

Municipal Service Areas

Adjacent Counties

- Require new development with septic systems to be designed so as to prevent nitrates and other pollutants of concern from septic disposal systems from impairing groundwater quality.

Related Policies: PF.P-21, PF.P-22

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

PF.I-24: On-site sewage disposal systems for individual lots and subdivisions may be operated by private property owners. A public agency shall manage a centralized community sewage disposal system. If lands proposed to be served by a community sewage disposal system are not within the boundaries or service area of an existing public sewage treatment agency, the Board of Supervisors shall, as a condition of development, designate a public agency to provide and manage the public sewer service. Sewer treatment facilities shall be designed to provide sewer service to existing developed areas, areas designated for commercial or industrial uses, or areas designated for rural residential development when part of a specific plan or policy plan overlay. An analysis of the financial viability of constructing, operating, and maintaining a proposed community sewage disposal system shall be required.

Related Policy: PF.P-21

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach, and Education

PF.I-25: Continue to enforce the abatement of ailing septic systems that have been demonstrated as causing a health and safety hazard.

Related Policy: PF.P-22

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

PF.I-26: Continue inspection of individual sewage facilities to ensure they are not adversely affecting water quality.

Related Policy: PF.P-22

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

SOLID WASTE

Planning Context

According to the state (California Public Resources Code, Section 40191[a]) "solid waste" is any discarded solid, semisolid, or liquid material that is not hazardous waste, manure, or vegetable or animal solid or semisolid. Garbage, paper, aluminum cans, and glass jars are common examples of nonhazardous solid waste that are typically disposed of in a landfill or recycled into new materials. Hazardous solid wastes are corrosive, toxic, reactive, or flammable materials, such as oil-based paints, solvents batteries, and automotive fuels that should be disposed of, or recycled, at a facility that specializes in hazardous waste management.

The County contracts with many different companies to collect solid waste. The collection companies pick up nonhazardous solid wastes and transport these wastes to a landfill. Nonrecyclable solid wastes generated in the unincorporated county are disposed of in one of two privately owned landfills: (1) the Potrero Hills Landfill, located near State Route (SR) 12 and Suisun City, and (2) the Hay Road Landfill, located on SR 113 east of Vacaville (see Figure PF-2). The Potrero Hills Landfill is located in the Secondary Management Area of the Suisun Marsh. The Public/Quasi-public land use designation applied to the Potrero Hills Landfill shall be temporary and limited to only a solid waste facility established consistent with Solano County Suisun Marsh Local Protection Program Utilities, Facilities and Transportation Policy 4. (Appendix C). All other Public/Quasi-public facilities and uses shall not be permitted at this site. When the Potrero Hills Landfill is closed, the land use designation for this area shall revert to Agriculture. The Potrero Hills Landfill will reach its near-term capacity in 2013, but may be expanded to reach its long-term capacity in 2049. The Hay Road Landfill has until 2070 before it reaches capacity. Each site shall be restored to its original natural condition consistent with each site's approved closure plan and reclamation plan. Restoration may be phased over the life of the landfill. Other than these two landfills, no other facilities accept solid waste in Solano County.

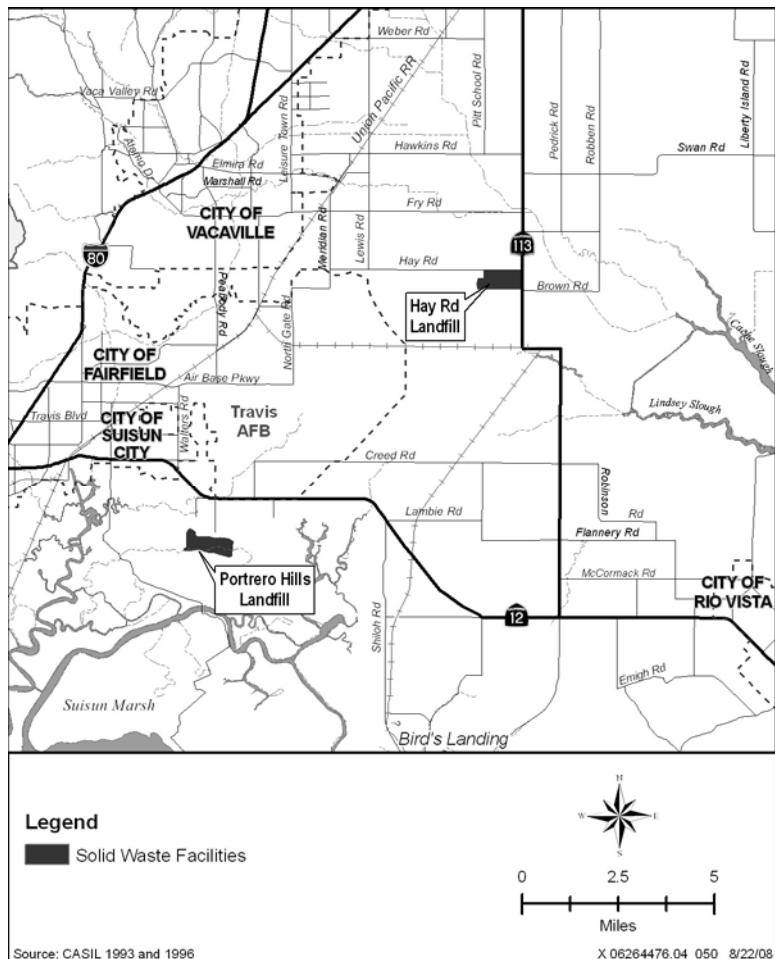


Figure PF-2
Solid Waste Facilities

As required by state law (Assembly Bill 939), Solano County diverts at least 50 percent of its solid waste from landfills to recycling facilities. Since 2000, the County has continued its recycling efforts, as recommended by the California Integrated Waste Management Board (CIWMB). The CIWMB is currently working to identify the most effective and efficient means to create a "zero waste California."

Solano County reaches its 50 percent garbage diversion rate by recycling bottles, cans, paper, and other recyclables. The unincorporated county does not have its own recycling facility. However, recycling facilities located in the cities accept recyclable material from unincorporated areas.

Related Plans, Programs, and Agencies

California Integrated Waste Management Board

CIWMB is a state agency under the umbrella of the California Environmental Protection Agency. In 1989, the legislature passed the Integrated Waste Management Act of 1989 (Assembly Bill 939). The act mandated that California's 450 jurisdictions divert 25 percent of their solid waste by 1995 and a 50 percent by 2000.

The CIWMB oversees, manages, and tracks California's solid waste. The CIWMB provides grants and loans to help cities, counties, businesses, and organizations meet their waste reduction, reuse, and recycling goals. It also provides funds to clean up solid waste disposal sites.

Solano County Integrated Waste Management Plan

The Solano County Integrated Waste Management Plan (IWMP) was developed in response to Assembly Bill 75, which required each state agency and large state facility to develop such a plan. This legislation requires the County to report annually on the implementation of its Integrated Waste Management Plan.

Policies

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- PF.P-23: Ensure that land uses adjacent to solid waste disposal sites will not conflict with the current or possible future use of solid waste disposal sites. Keep land adjacent to disposal sites that handle toxic and hazardous wastes in compatible land uses.
 - PF.P-24: Ensure that disposal operations for solid waste are performed in a manner compatible with surrounding land uses. Ensure that at the end of such operations the site is restored to a use compatible with surrounding land uses.
 - PF.P-25: Collaborate with the state, regional, and city agencies and landfill operators to ensure that the capacity of available landfills is sufficient. Prioritize capacity for waste generated within the county. Ensure that programs are designed to meet or exceed state requirements for landfill capacities.
 - PF.P-26: Implement and participate in local and regional programs that encourage source reduction and recycling of solid and hazardous wastes in Solano County.
 - PF.P-27: Require responsible waste management practices, including recycling and composting. Coordinate with service providers to compost green waste and encourage local farmers to use this.

- PF.P-28: Promote technologies that allow the use and reuse of solid waste, including biomass or biofuel as an alternative energy source.
- PF.P-29: Design all new landfill sites to reduce or eliminate off-site odor, leachate, transportation, vector, and other potential effects on nearby properties.
- PF.P-30: Collaborate with other counties to create a joint recycling program that accepts recyclable materials that are not currently recycled in Solano County.
- PF.P-31: The Public/Quasi-public land use designation applied to the Potrero Hills Landfill is a temporary designation and shall be limited to only a solid waste facility that is established consistent with Solano County *Suisun Marsh Local Protection Program* and *Suisun Marsh Protection Plan*. The temporary designation is for the life of a facility, as permitted. Once any portion of the facility is closed, the agricultural land use designation will be restored and in affect.

Implementation Programs

Regulations

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- PF.I-27: Amend the General Plan following completion of the update of Integrated Waste Management Plan to identify the location of solid waste disposal facilities planned for the future. The Public/Quasi-Public land use designation applied to the Potrero Hills Landfill shall be limited to only a solid waste facility that is established consistent with Solano County's *Suisun Marsh Local Protection Program* and *Suisun Marsh Protection Plan*.

Related Policies: PF.P-23, PF.P-24, PF.P-25, PF.P-26, PF.P-27, PF.P-28, PF.P-29, PF.P-30, PF.P-31

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Development Review

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- PF.I-28: Require that demolition projects submit a plan to maximize reuse of building materials at the time of permit application.

Related Policies: PF.P-26, PF.P-27

"Planning for a Sustainable Solano County"

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach, and Education

PF.I-29: Expand waste minimization efforts, including household recycling, food waste and green waste recycling, business paper recycling, and construction and demolition recycling. Require commercial and industrial recycling. Require building projects to recycle or reuse a minimum of 50 percent of unused or leftover building materials.

Related Policies: PF.P-26, PF.P-27

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Coordination with Other Agencies and Organizations

PF.I-30: Update and implement the *Solano County Integrated Waste Management Plan* and *Solano County Hazardous Waste Management Plan* to implement specific policies within this section regarding planning and implementation of solid waste and hazardous waste programs.

Related Policies: PF.P-23, PF.P-24, PF.P-25, PF.P-26, PF.P-27, PF.P-28, PF.P-29, PF.P-30

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

DRAINAGE

For additional information and policies related to flooding, refer to the Public Health and Safety chapter of this General Plan.

Planning Context

Drainage systems prevent waters, usually rainwater but also run-off from human activity, from pooling or otherwise inundating areas that are not

intended to receive such waters. A drainage system includes various types of constructed facilities and natural features that allow surface waters to enter an underground pipe system or open conveyance (ditch, canal, or swale) that transfers water to streams, rivers, or larger bodies of water.

Solano County cities are individually responsible for drainage within their borders and have constructed facilities to handle surface runoff. The unincorporated county relies heavily on gravity to drain excess surface waters to natural water courses. Relying on natural waterways means the County must evaluate the use of the watershed to preserve the natural integrity of the waterways and to prevent damage to the watershed or individual water courses. Landowners within the unincorporated county's watersheds must capture runoff on-site because there is no other system available to accommodate that runoff. These landowners will need to find ways to allow water to filter into the soil on their properties and/or use other natural systems to detain and filter runoff. This also has environmental benefits, as pollutants can be captured locally, rather than making their way into natural waterways, and water can be re-used on-site, where appropriate.

Policies

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- PF.P-32: Cooperate with the cities, Solano County Water Agency, and other special districts to serve all areas in need of drainage improvements.
- PF.P-33: Require development projects to minimize pollution of stormwater, water bodies receiving runoff, and groundwater, and to maximize groundwater recharge potential by:
- implementing planning and engineering design standards that use low-impact development techniques and approaches to maintain and mimic the natural hydrologic regime;
 - using "infiltration" style low-impact development technologies; and
 - following stormwater best management practices during and after construction, in accordance with relevant state-required stormwater permits.
- PF.P-34: Control the rate and dispersal of runoff from developments through use of detention and retention basins, appropriate landscaping, minimal use of impervious surfaces, and other stormwater facilities.
- PF.P-35: Provide for the costs of operating and maintaining storm drainage facilities by establishing the appropriate funding

entity and fees to ensure that the costs are borne by those receiving benefit.

PF.P-36: Support Solano County Water Agency efforts to improve flood control and storm drain facilities.

PF.P-37: Encourage and pursue the consolidation of flood control management responsibilities within a single countywide entity.

Implementation Programs

Funding, Physical Improvements, and Capital Projects

PF.I-31: Design, construct, and maintain County buildings, roads, bridges, drainage, and other facilities to minimize sediment and other pollutants in stormwater flows. Develop and implement best management practices for ongoing maintenance and operation.

Prepare and implement a BMP manual for minimizing stormwater pollutants associated with construction and maintenance of County buildings, roads, and other facilities.

Related Policies: PF.P-11, PF.P-33, RS.P-71

Agency/Department: Department of Resource Management

Funding Source: As identified in Capital Improvement Program

Time Frame: Ongoing

Development Review

PF.I-32: As a condition of project approval, require new development to provide adequate on-site and off-site stormwater and drainage facilities to control both direct and indirect erosion and discharges of pollutants and/or sediments so that "no net increase in runoff" occurs as a result of the proposed project. To determine the needs for facilities and best management practices, the County will require, when necessary, that a licensed and County-approved civil engineer perform a hydrological/drainage analysis. The project applicant would be responsible for the cost of this analysis.

In cases where a local or regional drainage facility may be the best solution to serve multiple

properties or an entire drainage basin, the County will work with property owners and public agencies with jurisdiction in the affected area to devise an appropriate funding mechanism (e.g., impact fees, assessment district) for such facilities.

Related Policies: PF.P-33, PF.P-35

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

PF.I-33: Require that future development in the Limited Industrial area northeast of Dixon be consistent with applicable drainage studies and regional drainage plans applicable to the area, in coordination with the City of Dixon, Resource Conservation Districts and other agencies. Prior to development of this area, the applicant shall enter into a development agreement with the County specifying how drainage and traffic impacts would be mitigated. The County shall work in cooperation with the City of Dixon, Resource Conservation Districts and other agencies in determining impacts and mitigation strategies.

Related Policies: LU.P-28, PF.P-34, PF.P-35

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach, and Education

PF.I-34: Provide incentives (such as water quality credits, larger paved areas, or other site plan considerations) for replacing areas that use extensive impermeable materials with permeable materials for surfaces such as driveways, parking lots, and sidewalks in the unincorporated county.

Related Policies: PF.P-32, PF.P-33, PF.P-34

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

FIRE PROTECTION AND EMERGENCY SERVICES

Planning Context

Fire protection services, including on-call responders for wildland, residential, commercial, and vehicle fires are provided in Solano County through fire protection districts and the California Department of Forestry and Fire Protection (CAL FIRE). The districts and CAL FIRE also provide fire prevention programs, such as plan checking, public education, and support services. Emergency services are provided by paramedics and emergency medical technicians (EMTs) who perform pre-hospital medical procedures to aid injured victims of automobile accidents, heart attacks, drownings, gunshot wounds, and other unexpected incidents that require immediate medical attention. Emergency services providers give care while they transport the sick or injured to a medical facility.

In the unincorporated county, six fire districts and CAL FIRE cooperate to provide fire protection and emergency services. The six fire districts are the Cordelia Fire Protection District (FPD), the Dixon FPD, the East Vallejo FPD, the Montezuma FPD, the Suisun FPD, and the Vacaville FPD. In addition, CAL FIRE operates the Gordon Valley Fire Station located in Napa County. This station assists with fire protection services for several unincorporated communities in Solano County.

Many of the fire districts are under contract with the cities to use their stations and equipment. The Dixon FPD is currently under contract with the City of Dixon Fire Department and uses the city's station. Also, East Vallejo FPD is under contract with the City of Vallejo Fire District to provide services to unincorporated southeast Vallejo.

The Insurance Services Office (ISO) rates areas on how quickly emergency service providers arrive on scene at an incident. ISO ratings range from 10 which indicate the slowest service to 1 for the quickest service. Fire districts may have different rating for different service areas within their jurisdiction. Some areas of the county have slow service ratings because of matters beyond the fire districts' control, such as distance responders must travel from a station, lack of funding, or poor road conditions. Thorough investigations are necessary to determine strategies to improve service. The County may be able to resolve these issues through improved and additional infrastructure, additional funds to complete needed improvements and other methods.

In Solano County the local emergency medical service agency is the Solano Emergency Medical Services Cooperative. (SEMSC). SEMSC is a joint parties agreement between the county and the cities, with the exception of Vacaville, that provides for a single ambulance provided that employs both paramedics and EMTs to provide prehospital emergency care to any persons with the jurisdiction of the agency. Fire departments and districts also respond with EMS personnel to reduce response times.

Some parts of the unincorporated county may be considered "underserved" regarding emergency medical services because of number of available trained paramedics and EMTs and slower response times for service.

Policies

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| PF.P-38: | Ensure accessible and cost-effective fire and emergency medical service throughout the county. Facilitate coordination among city and county fire agencies and districts to improve response times, increase services levels, provide additional training, and obtain essential equipment. |
| PF.P-39: | Identify and require incorporation of fire protection and emergency response measures in the review and approval of new projects. |

Implementation Programs

Development Review

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| PF.I-35: | Coordinate with the fire districts and CAL FIRE during project review to ensure that all new development incorporates appropriate fire-safety techniques, including fire-safe building materials, early-warning systems, adequate clear spaces and fuel reduction, adequate escape routes and facilities, fire breaks, and sufficient water supply systems for fire suppression. |
|----------|--|

Related Policy: PF.P-39

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Funding, Physical Improvements, and Capital Projects

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| PF.I-36: | Collaborate with fire districts to evaluate additional funding options to improve infrastructure needed for fire protection. |
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Related Policy: PF.P-38

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach, and Education

PF.I-37: Support incentives, such as streamlined permitting and fee reductions that encourage compliance with fire safety requirements.

Related Policy: PF.P-38

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

PF.I-38: Support public education programs that encourage compliance with fire safety requirements.

Related Policy: PF.P-38

Agency/Department: Department of Resource Management; Fire Districts; CAL FIRE

Funding Source: General Fund

Time Frame: Ongoing

Coordination with Other Agencies and Organizations

PF.I-39: In cooperation with fire districts, investigate options to improve service, such as merging districts, increasing training opportunities, and sharing and obtaining essential equipment.

Related Policy: PF.P-38

Agency/Department: Department of Resource Management; Local Agency Formation Commission

Funding Source: General Fund

Time Frame: Ongoing

PF.I-40: Maintain, and expand as necessary to meet demand, the emergency services dispatch system that coordinates fire, emergency medical, and law enforcement response.

Related Policy: PF.P-38

Agency/Department: Fire districts; Solano Emergency Medical Services Cooperative

Funding Source: General Fund

Time Frame: Ongoing

PF.I-41: Continue to work collaboratively with countywide emergency service agencies to develop mutual aid and response agreements. Facilitate the development of mutual aid agreements among the fire districts to ensure acceptable response times for all areas of the county.

Related Policy: PF.P-38

Agency/Department: Office of Emergency Services; Fire districts; Solano Emergency Medical Services Cooperative

Funding Source: General Fund

Time Frame: Ongoing

LAW ENFORCEMENT

Planning Context

Solano County provides law enforcement services to prevent, respond to, and apprehend criminal activity. The majority of the law enforcement services are administered by the Solano County Office of the Sheriff, a state constitutional office headed by an elected sheriff.

The sheriff is responsible for a variety of law enforcement services, such as safety patrol services, dispatch of safety personnel, holding custody of adult law offenders, operation of the jail and security at court facilities. The sheriff operates two jails in Solano County: the Fairfield Main Facility and the Claybank Facility. The sheriff also conducts investigations, provides coroner services, maintains criminal records, and administers specialty services including SWAT, Marine Patrol, Canine Narcotics Enforcement, Bicycle Enforcement, and Crowd Control Team. These duties are performed by deputy sheriffs, correctional officers, sheriff service technicians, public safety dispatchers, evidence technicians, legal procedures clerks, and administrative staff. The sheriff also relies on partnerships with other agencies in the community, intergovernmental organizations and other employee organizations, to implement effective law enforcement, safe, humane, and secure jails, and security for the superior courts.

Compared with more densely populated areas in California, unincorporated Solano County has low crime rates. The location of reported criminal activities are not concentrated in specific regions of the unincorporated County, but are distributed evenly throughout. While crime rates and types of crime in Solano County reflect that of a rural community, this may change as the County grows to reflect more "urban" types of crime. The following policies and implementation programs focus

on maintaining response times, identifying needs for increased staffing, equipment, training needs, crime prevention, and disaster preparedness.

Policies

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- PF.P-40: Provide an effective and responsive level of police protection (including facilities, personnel, and equipment) through the Solano County Office of the Sheriff and in coordination with city police departments.
- PF.P-41: In the review and approval of County and City projects, identify and consider the law enforcement needs generated by the project.

Implementation Programs

Development Review

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- PF.I-42: Coordinate with the sheriff to identify and consider the impact on law enforcement services during project review.
- Related Policy: PF.P-41
- Agency/Department: Department of Resource Management
- Funding Source: General Fund
- Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach, and Education

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- PF.I-43: Work with criminal justice agencies and community groups to support programs that offer information about crime prevention techniques.
- Related Policy: PF.P-40
- Agency/Department: Solano County Office of the Sheriff
- Funding Source: General Fund
- Time Frame: Ongoing

Coordination with Other Agencies and Organizations

-
- PF.I-44: Maintain adequate staffing levels, equipment and resources, and undertake disaster preparedness training as necessary to provide essential law enforcement and emergency services.

Related Policy: PF.P-40

Agency/Department: Solano County Office of the Sheriff

Funding Source: General Fund

Time Frame: Ongoing

PF.I-45: Work with schools and community groups to identify individuals who show early signs of potential for criminal activity. Develop a support program, based in psychology, to counsel these individuals.

Related Policy: PF.P-40

Agency/Department: Solano County Office of the Sheriff

Funding Source: General Fund

Time Frame: Ongoing

PUBLIC EDUCATION

Planning Context

A public education system provides children and adults with access to learning free of charge. The system is based on a hierarchy of schools, from preschool through high school and continuation school, and on to college. Traditional goals of a public education system are to provide convenient access to local schools, provide low student-teacher ratios, and achieve high scores on the statewide testing program (STAR) and other academic performance tests.

The public school hierarchy begins with preschool. However, unlike elementary school, preschool attendance is not mandatory. In Solano County, preschool education is coordinated and overseen by two groups, the First 5 Solano Children and Families Commission and the Solano County Office of Education. These two groups are responsible for organizing other groups to provide preschool services. The preschool providers in Solano County are Head Start, State Preschool, and other public and private for-profit and nonprofit groups. As of 2006, 52 percent of Solano County 4-year-olds attended preschool. The Solano County Preschool for All program focuses on increasing attendance for preschool age students.

Solano County's elementary, middle, high, and alternative and continuation schools are organized into a system of school districts, based on location. There are seven school districts based in Solano County and two school districts that lie partially within the Solano County limits. The Davis Unified School District and the Winters Unified School District lie partially within Solano County but are based in Yolo County. The majority of students in Solano County are enrolled in one of the seven school districts based in

Solano County, but a small group of students attend Davis Unified School District or Winters Unified School District. Each school district offers at least one elementary, one middle, and one high school. Additionally, some offer alternative, continuation, and/or community day schools.

The majority of unincorporated county students attend the school nearest to their residence, which is generally the school located in the nearest city. In addition, a number of private schools are located in Solano County, most within the incorporated area.

The schools in Solano County have adequate current capacity and facilities for the student population. The school system is looking to the future and planning new facilities and services to provide for Solano County's growing population. The following policies and implementation programs address a variety of needs, including future school facilities and where to locate them, vocational training, recreational opportunities, increased cooperation between the school districts and the County, and financing.

Related Plans, Programs, and Agencies

Solano County Office of Education

The Solano County Office of Education (SCOE) works as an intermediate agency between local schools and the California Department of Education. The SCOE provides support services to the unified school districts and the community college in Solano County, serving approximately 85,000 students. The SCOE also has fiscal oversight over the school districts. SCOE directly educates students in special education, regional occupational programs, and court and community schools.

Solano County Community College District

The Solano County Community College District consists of the Solano Community College in unincorporated county area just outside of the city of Fairfield. The community college offers post-high school education, lower division college courses, and adult learning opportunities. They also partner with Chapman University and John F. Kennedy University to provide upper division college courses.

First 5 Solano Children and Families Commission

First 5 Solano Children and Families Commission (First 5 Solano) creates programs and partnerships with community entities to promote, support and improve the lives of young children, families and communities in Solano County. First 5 Solano and the Solano County Office of Education worked together to create a plan to guarantee access to preschool for all children in Solano County, the *Solano Preschool for All Plan*. Initially, the goal of this plan is to provide one year of preschool, the year before a child enters kindergarten. Implementation of this plan includes local fundraising and working with local school districts to identify their readiness and needs for expanding preschool programs

Policies

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- PF.P-42: Coordinate with local school districts and the community college district to plan for and set aside adequate sites for future facilities.
- PF.P-43: Locate educational facilities appropriately to make efficient use of existing and planned facilities, including park and recreational facilities.
- PF.P-44: Coordinate with the local school districts in developing and implementing school facility mitigation plans to ensure the necessary financing for the provision of new school facilities.
- PF.P-45: Coordinate with the local school districts and other public and private education providers to ensure that quality education is available for Solano residents of all ages.

Implementation Programs

Ongoing Planning Efforts, Public Outreach, and Education

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- PF.I-46: Integrate parks and recreation open space corridors and trails where appropriate into existing and future school and community college sites to maximize the benefits of recreational experience as part of the education process. Where possible, pursue joint use sites to allow for shared recreation and education facilities to maximize their use.

Related Policies: PF.P-43, PF.P-45

Agency/Department: Department of Resource Management; Solano County Office of Education

Funding Source: General Fund

Time Frame: Ongoing

Coordination with Other Agencies and Organizations

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- PF.I-47: Continue to work with the school and community college districts to ensure adequate sites are available in the community and that impact fees are assessed correctly.

Related Policies: PF.P-42, PF.P-43, PF.P-44, PF.P-45

Agency/Department: Department of Resource Management; Solano County Office of Education

Public Facilities and Services Chapter

Funding Source: General Fund

Time Frame: Ongoing

PF.I-48: Work with First 5 Solano Children and Families Commission and the Solano County Office of Education to implement the *Solano County Preschool for All Plan*.

Related Policy: PF.P-45

Agency/Department: Department of Resource Management; Department of Health and Social Services; Solano County Office of Education

Funding Source: General Fund

Time Frame: Ongoing

PF.I-49: Encourage education providers to locate future schools within urban areas to achieve the most efficient use of facilities, in particular allowing for the provision of child care and preschool programs.

Related Policies: PF.P-42, PF.P-43

Agency/Department: Department of Resource Management; Solano County Office of Education

Funding Source: General Fund

Time Frame: Ongoing

PF.I-50: Coordinate with the Solano County Office of Education to provide a career center, providing vocational skills training and college extension classes from the University of California, Davis, and other colleges and universities.

Related Policy: PF.P-45

Agency/Department: Department of Resource Management; University of California Cooperative Extension; Solano Community College

Funding Source: General Fund

Time Frame: Ongoing

COMMUNITY FACILITIES

Planning Context

Community facilities are public spaces that are openly accessible to the entire community. These facilities often provide free services. Community facilities generally provided by local governments are libraries, community centers, civic centers, cemeteries, and other facilities for the delivery of various community services. Currently there are no community or senior centers in the unincorporated area of the County, although all of the cities have both community and senior centers.

The Solano County Library System operates eight public libraries located throughout the county. Two are in the City of Fairfield, two are in the City of Vallejo, two are in the City of Vacaville, one is in the City of Suisun, and one in the City of Rio Vista. Solano County also operates the County Law Library in Fairfield. In addition to book services, the libraries also have public meeting rooms, group study rooms, and public computers.

The additional functions provided by libraries throughout the county present opportunities to serve the elderly and other underserved populations in need of community centers, health facilities, and social services. The libraries already provide some of these services informally through their meeting facilities and could be used to expand County services for such groups, including health care and social services, through joint use of facilities.

Although the library system provides a number of important services, the population of Solano County is outgrowing the library facilities when compared to the service standards outlined in the Solano County Library Facilities Master Plan completed in 2001. For rural areas, which comprise the majority of the unincorporated county, Solano County has adopted service standards of 3.2 volumes per capita, five seats per 1,000 population, and 0.4 computers per 1,000 population. Currently, the County provides 1.6 volumes per capita, 1.9 seats per 1,000 population, and 0.4 computers per 1,000 population.

Achieving goals set out in the facilities master plan are important for Solano County because libraries are essential portals to public information and lifelong learning. Among other functions, they are places for one-stop information "shopping," where County departments can disseminate information and where the public goes to access information from multiple sources. Libraries also help to support important civic objectives, including child and adult literacy and life-long learning. Libraries are a key factor in creating informed citizens.

A recent (2008) addition to community facilities within Solano County is the Sacramento Valley VA National Cemetery. As of 2008, it was planned to accommodate an initial phase of 14 acres, and 8,466 gravesites. It will be expanded to serve local veterans with an expectation that its total 560 acres will be sufficient for the next 50 years.

Related Plans, Programs, and Agencies

Capital Improvement Program

The Capital Improvement Program consists of all building projects valued at greater than \$25,000 that are built to house County functions. New or improved community facilities to be developed by the County first need to be incorporated into the Capital Improvement Program so they can be included in County-wide planning for facilities.

Solano County Library Facilities Master Plan

The Library Facilities Master Plan is a comprehensive plan that makes recommendations for meeting the need for library services and facilities through the year 2020. It was last updated in 2001 and includes all of the communities served by the Solano County Library system.

Solano County Library Strategic Plan

The Library Strategic Plan was developed through a series of meetings of a community-based planning committee. It defines the roles of the library system as providing basic literacy, materials on current topics of interest, general information, and information literacy.

Policies

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- PF.P-46: Coordinate with the cities to provide community facilities that are accessible to residents.
 - PF.P-47: Ensure access to libraries and other community facilities and services for all residents, including the elderly and underserved populations.
 - PF.P-48: Continue to support joint use of community facilities by various community groups and foster joint use agreements for community facilities with other agencies.

Implementation Programs

Funding, Physical Improvements, and Capital Projects

-
- PF.I-51: Community facilities should be identified and developed through the Capital Improvement Program.

Related Policies: PF.P-46, PF.P-47

Agency/Department: Department of General Services

Funding Source: General Fund

Time Frame: Ongoing

Ongoing Planning Efforts, Public Outreach, and Education

PF.I-52: Identify and consider opportunities for libraries and other community facilities to share facilities and services.

Related Policy: PF.P-45

Agency/Department: Department of General Services; Solano County Library

Funding Source: General Fund

Time Frame: Ongoing

Coordination with Other Agencies and Organizations

PF.I-53: Actively support implementation of facility and service strategic plans, including *the Solano County Library Facilities Master Plan (2001)* and *Solano County Library Strategic Plan (2006)*.

Related Policies: PF.P-46, PF.P-47, PF.P-48

Agency/Department: Department of Resource Management; Department of General Services; Solano County Library

Funding Source: General Fund

Time Frame: Ongoing

UTILITIES

Planning Context

Utilities are the infrastructure that provide energy (natural gas and electricity) communications (land lines and cellular), information, and entertainment services to Solano County. Solano County relies on multiple private companies for these services to provide redundancy and reliability.

The following policies and implementation programs are directed at locating future utility alignments and avoiding disruption to natural areas.

Related Plans, Programs, and Agencies

California Public Utilities Commission

The California Public Utilities Commission regulates privately owned telecommunications, electric, natural gas, water, railroad, rail transit, and passenger transportation companies, in addition to authorizing video franchises. The California Public Utilities Commission works to make California a national and international leader on a number of initiatives related to clean energy and policies designed to benefit consumers, the environment, and the economy.

Federal Energy Regulatory Commission

The Federal Energy Regulatory Commission is an independent agency that regulates the interstate transmission of electricity, natural gas, and oil. The Federal Energy Regulatory Commission also reviews proposals to build liquefied natural gas terminals and interstate natural gas pipelines as well as licensing hydropower projects.

Policies

-
- PF.P-49: Use parallel or existing rights-of-way for gas, electric, and telephone utility alignments in a manner that avoids heavily developed areas.
 - PF.P-50: Locate, design, and construct transmission lines in a manner that minimizes disruption of natural vegetation, agricultural activities, scenic areas, and avoids unnecessary scarring of hill areas.
 - PF.P-51: Encourage undergrounding of local utility distribution lines where feasible.
 - PF.P-52: Increase high-speed wireless access for all residents.

Implementation Programs

Coordination with Other Agencies and Organizations

-
- PF.I-54: Direct utility companies to locate transmission lines within existing rights-of-way or other locations that minimize impacts on human populations and natural areas.

Related Policies: PF.P-49, PF.P-50

Agency/Department: Department of Resource Management

Funding Source: General Fund

Public Facilities and Services Chapter

Time Frame: Ongoing

PF.I-55: Encourage local utility companies to provide high-speed wireless internet access for all residents; prioritize developing transmission lines for solar, wind, and other alternative energy sources; and ensure resiliency and redundant access to the utility grid.

Related Policies: PF.P-49, PF.P-50, PF.P-51, PF.P-52

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

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"Planning for a Sustainable Solano County"

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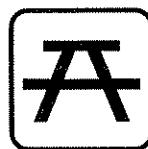
CHAPTER

10 PARK AND RECREATION ELEMENT

"Planning for a Sustainable Solano County"

"Planning for a Sustainable Solano County"

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Lake Solano Regional Park

SOLANO COUNTY PARK AND RECREATION ELEMENT

A Part of the
Solano County General Plan

June 24, 2003

Solano County Park and Recreation Element

A Part of the Solano County General Plan

Approved June 5, 2003

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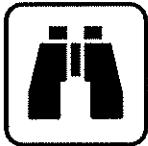


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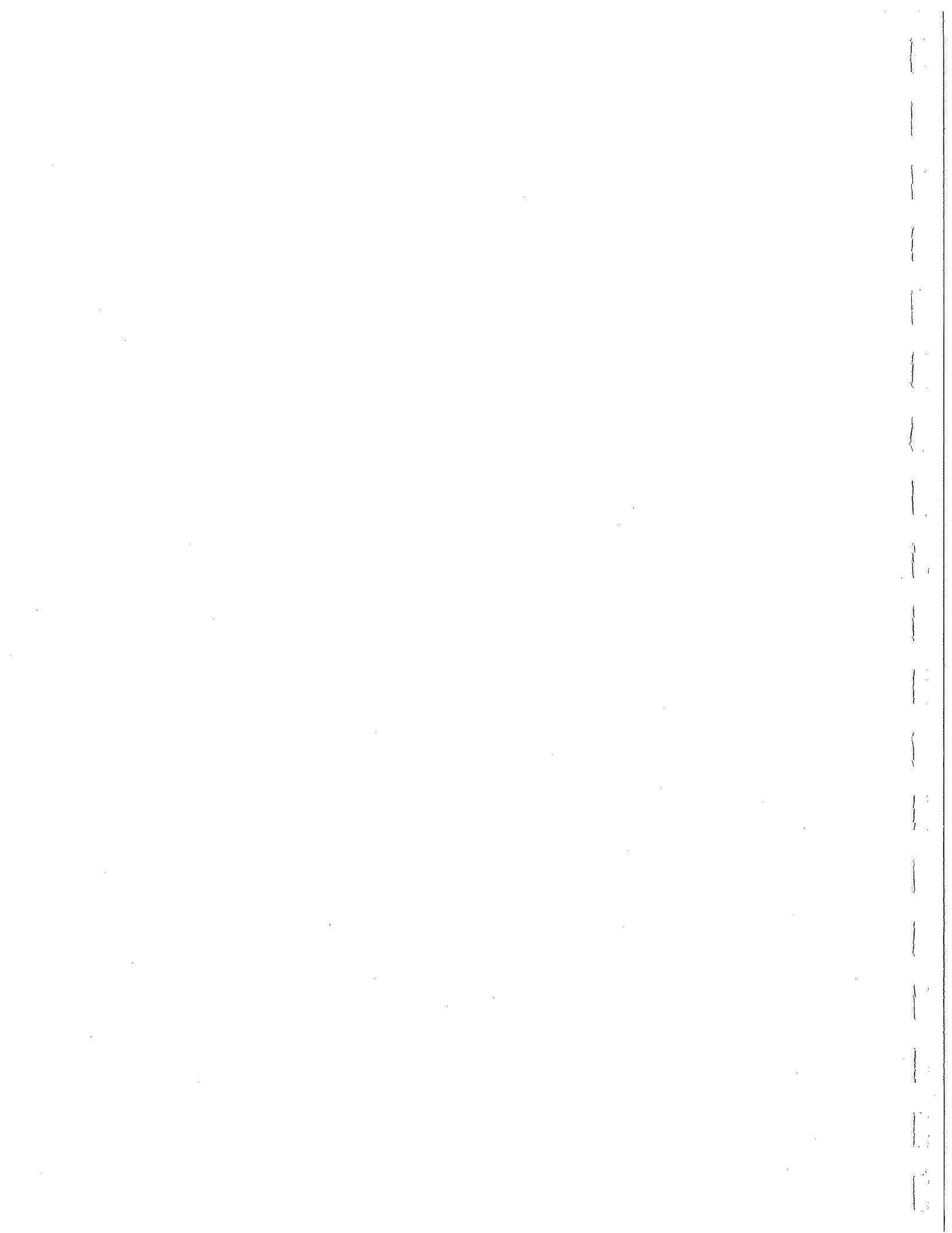
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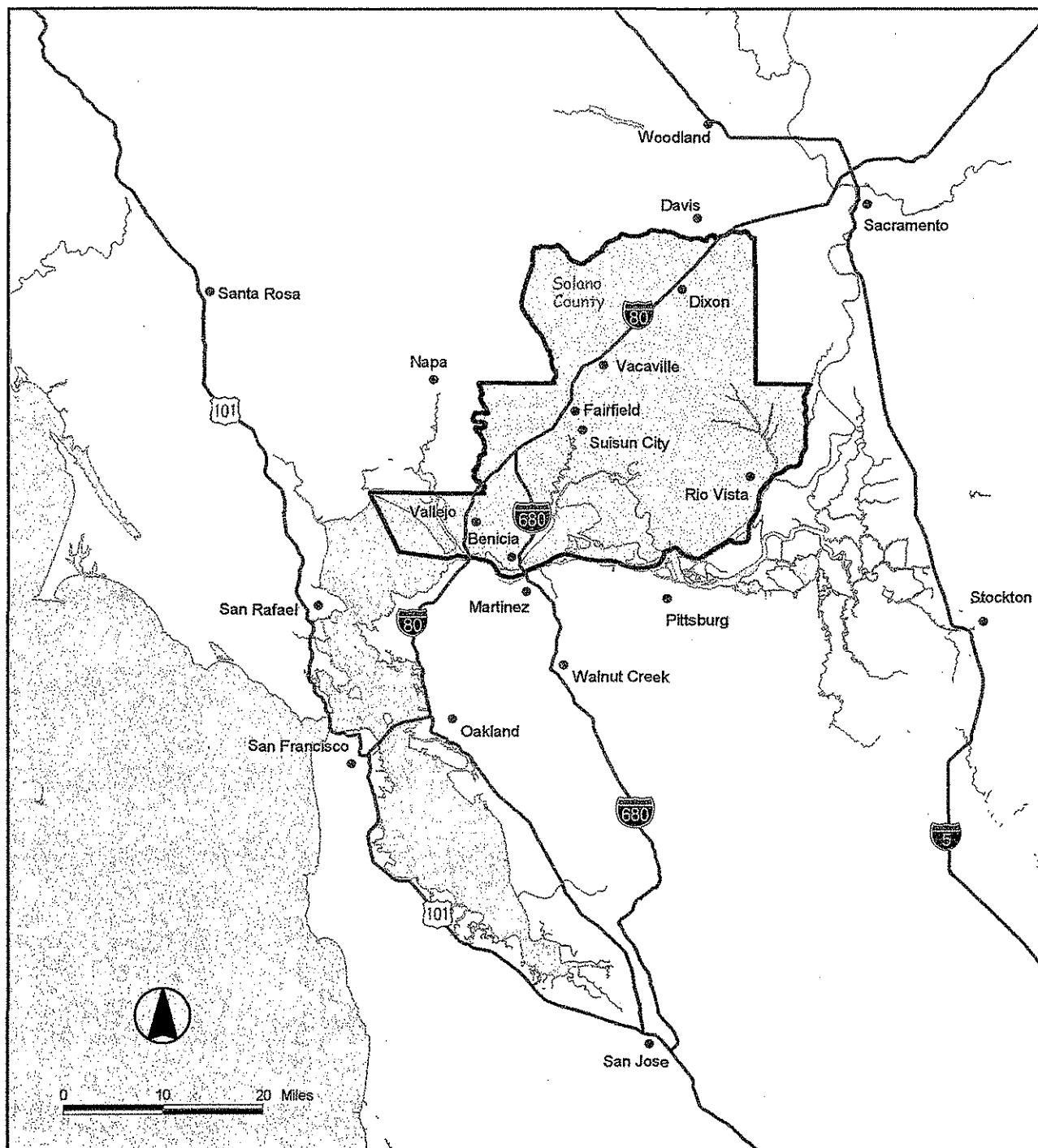


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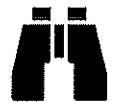
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Chapter One INTRODUCTION

PURPOSE OF THE PLAN

The Park and Recreation Element of the Solano County General Plan is intended to provide a long range guide for the development of regional recreation facilities and the preservation of natural and historical resources in Solano County.

AUTHORITY AND RELATIONSHIP TO GENERAL PLAN

Recreation Elements may be adopted as optional elements of city and county general plans under Section 65303 of the California Government Code, which states:

65303. The general plan may include the following elements or any part of phase thereof:

(A) A Recreation Element showing a comprehensive system of areas and public sites for recreation, including and following, and, when practicable, their locations and proposed development

- Natural reservations
- Parks
- Parkway
- Beaches
- Playgrounds
- Recreational community gardens
- Other recreation areas

By law, if a Recreation Element is adopted, objectives and other proposals are required to be consistent with other elements of the General Plan. The Park and Recreation Element has been developed to be consistent with all elements of the Solano County General Plan.

The two elements which are most relevant are the Resource Conservation and Open Space Plan, and the Tri-City and County Open Space Plan, both of which have become elements of the County General Plan. The goals, objectives, and proposals within the Park and Recreation Element are in concert with the goals, objectives, and policies of these General Plan elements. For example, Goal #1 of the Park and Recreation Element is "To preserve and manage a diverse system of regional parks and natural resources for the enjoyment of present and future County residents." A goal of the Resource Conservation and Open Space Plan is "To preserve for subsequent generations the greatest possible freedom of choice in the use and enjoyment of the County's natural resources." Similarly, an objective of the Tri-City and

County Open Space Plan is "To provide for the present and future needs for compatible regional outdoor recreational opportunities in the County through continual recreation planning for the Cooperative Planning Area."

Implementation of the proposals within the Park and Recreation Element should consider the content and status of the two plans, including any subsequent revisions.

METHODOLOGY

The Park and Recreation Element is oriented toward fulfilling the regional recreation needs of Solano County residents. The plan identifies existing and projected recreation needs in the County within a time frame extending to 2015. Policies, objectives and proposals of the plan focus on meeting these needs. Planning work was carried out under the direction of the Solano County Environmental Management Department and the Solano County Park Division, and assisted by an advisory group with representatives of the Greater Vallejo Recreation District, the cities of Benicia, Dixon, Fairfield, Rio Vista, Suisun City and Vacaville, the Bureau of Reclamation, the Bay Area Open Space Council, the Delta Protection Commission, the Putah Creek Discovery Corridor Group, and others (see Appendix H). The Plan is a living document which should be revised as needed, and considered for updating at least every five years.

The Park and Recreation Element takes a countywide approach to recreation planning, assigning to the County a role as promoter and coordinator among the various local, state and federal agencies involved in providing regional recreational opportunities in Solano County. The plan assumes that the cities and the Greater Vallejo Recreation District will continue to provide neighborhood and community parks, as well as those regional parks which are now operated or have been proposed by cities. The County is to be the primary provider of regional parks in unincorporated areas.

PLAN FORMAT

Following the Introduction, the Park and Recreation Element is divided into five additional chapters. Chapter Two sets forth and discusses overall goals and objectives of the plan. Chapter Three describes the current administrative framework and regional recreation facilities in the County. Chapter Four identifies current and projected recreation needs. Chapter Five proposes plans for meeting regional recreation needs in the County. Chapter Six details ways these plans could be implemented. Appendixes and References conclude the Element.



Chapter Two

GOALS AND OBJECTIVES

Two overall goals have been adopted to guide regional recreation planning in Solano County:

1. Preserve and manage a diverse system of regional parks and natural resources for the enjoyment of present and future County residents and park visitors.
2. Promote, develop and manage diversified recreational facilities to meet the regional recreation needs of the County.

The goals reflect two themes apparent in past recreation policies as well as in goals and objectives of other County general plan elements: first, protection of natural and recreational resources; and second, provision of new facilities as needed. The goals are also consistent with state and federal recreation policies, which assign responsibility to counties for carrying out countywide recreation planning, and for coordinating and/or developing facilities to serve regional and local areas.

Eleven objectives were established to direct efforts toward achieving the goals. These objectives fall into four general areas of current concern in recreation planning. Topic areas relating to Goal 1 include countywide planning and coordination of recreational plans and activities, and land use considerations in identifying and developing recreation facilities and protecting resource areas. Goal 2 relates to the development of specific recreation facilities by the County and other public agencies and the role of private enterprise in recreation development. The objectives are more specific and manageable aims than the goals themselves and are, in turn, supported by a series of policies and proposals. The policies and proposals are designed to lead toward achievement of the plan goals and objectives.

Plan objectives and general policies are presented below under the topic areas to which they relate. More specific implementation strategies are contained in the Plan Proposals set forth in Chapter Five.

COUNTYWIDE PLANNING AND COORDINATION

The California Outdoor Recreation Resources Plan assigns a countywide planning and coordinating role to counties, including both recreation planning and coordination of plans and activities with those of other counties, cities and other levels of government. Solano County presently exercises a countywide planning function in other elements of the General Plan, most notably the Land Use Element. This element seeks to coordinate plans of the cities, the County and other entities that have an interest in the County, as well as to achieve some countywide goals. The Park and Recreation Plan is similarly oriented in that it seeks to coordinate recreation plans of

the County, the cities, the Greater Vallejo Recreation District, the State, and the federal government in a manner which will best meet the regional recreation needs of County residents. The County has a responsibility to work actively with these and other agencies and private organizations to achieve the aims set forth in the plan. Through its countywide planning role, the County is able to identify significant recreational needs and resources, and to work with the appropriate agencies to ensure their needs are met. The County can also support efforts of cities to provide regional recreation opportunities for their residents by means of direct planning and development cooperation where needed, and by advocating city proposals to other agencies from which cooperation or funds are requested. Demand for identified recreational needs in the County is projected to continue. Since many of these needs can be met by cities, districts and other agencies, as well as by the County, general policies to encourage development of the needed facilities by all appropriate parties should be clearly set forth. In addition, the County can negotiate agreements with other public agencies and private organizations for joint or reciprocal undertakings to protect resource areas, acquire additional resource areas, provide recreation benefits which might otherwise not be enjoyed, or to carry out operations more economically.

Objective 1: Coordinate the planning and development of regional recreational facilities between federal, state, and local agencies within Solano County.

Policies

- A. The County shall work with and assist local agencies and districts in identifying and protecting significant regional recreation resources.
- B. The County shall work with local agencies and districts in identifying regional recreation needs, and coordinating and supporting plans and programs to address those needs.
- C. The County shall encourage and support other public agencies and private groups in the development of regional recreation facilities that are consistent with Park and Recreation Element objectives.
- D. The County shall support and advocate proposals that advance County recreation goals and objectives to other agencies that may provide funding and assistance.
- E. The County shall actively pursue cost-effective joint or reciprocal agreements with other governmental jurisdictions or private groups for the acquisition, development and operation of regional recreation facilities.

Objective 2: Ensure that there are at least ten (10) acres of regional and local parkland per each 1,000 persons.

Policies

- A. Through its planning role, the County shall work with other agencies and private interests to provide for adequate regional parkland and facilities.
- B. The County shall actively participate in the planning of projects that have regional recreation benefits.
- C. The County shall encourage and support local agency efforts to achieve their objectives for providing local park land. All local providers seek to provide at least five acres of parkland for each 1,000 persons.
- D. The County shall seek available state and federal grant funds for acquiring and developing regional parks.
- E. The County shall encourage and support other public agencies and private groups in the development of regional recreation facilities that are consistent with Park and Recreation Element objectives.

LAND USE

There are a number of areas in the County which are especially rich in recreation potential due to the presence of significant natural features or resources. The Solano Land Trust and other non-profit organizations have acquired and manage several resource areas. For example, the Solano Land Trust owns and manages the Jepson Prairie Preserve, Lynch Canyon, and Rush Ranch. These areas are open to the public. They offer a wide range of recreational opportunities, and resource restoration and interpretive services are provided. It is the County's responsibility, in cooperation with other agencies and organizations, to evaluate and identify those areas which are best suited to meet the County's varied recreational needs. This includes identifying and protecting specific recreational sites proposed for development, and sites which may have potential for development sometime in the future.

Recreational resource areas, which provide opportunities for both active and passive recreational activities, should also be protected.

In identifying and developing specific recreation sites, consideration must be given to potential conflicts that can occur with adjacent land uses. Shooting ranges and off-road vehicle parks, are, perhaps, the most difficult facilities to site due to anticipated impacts of noise and safety hazards. Other types of recreational facilities, however, can create conflicts in the areas of traffic and parking problems, noise, theft and vandalism. Conversely, adjacent land uses can impact recreational areas through such things as visual impacts, erosion problems, and effects of agricultural practices such as spraying of pesticides. Some of these problems can be mitigated through

such measures as fencing and noise barriers, and through restricting hours of park operation. It is more effective, however, to avoid such problems altogether through careful siting of recreational facilities and through planning for appropriate surrounding land uses. Good land use planning can also reduce costs of recreational development. Appropriate buffer zones within the park boundaries shall be considered according to the type of recreation and adjacent property uses. Park sites are to be planned to be protective of their own natural and cultural resources, as well as the agricultural areas and watersheds in which they are situated.

Multiple use of land for recreation and other pursuits can reduce or offset costs of recreation development and management and increase recreation value and enjoyment. This approach is particularly useful in the case of public lands held by other agencies, such as water and sewer districts, where significant recreation potential exists. In addition, recreational resource areas provide expanded opportunities for active and passive recreation activities through multiple use of lands within these areas. Regional recreation activities usually center on a principal natural feature. These areas should be developed in a manner compatible with the natural resources and surrounding land uses. Multiple uses tend to ensure continuing enjoyment by the public.

Objective 3: Identify, preserve and manage significant regional recreation and natural areas.

Policies

- A. The County shall identify natural resource areas that may provide for regional recreation opportunities.
- B. The County shall use native plants as a water conservation measure.
- C. The County shall work to protect identified recreational sites and natural resource areas.
- D. Recreation activities and facilities shall not adversely impact adjacent land uses.
 - Special attention shall be given to the agriculture and watershed of the area in this regard. Special attention may include:
 - Appropriate fencing
 - Noise barriers
 - Hours of operation
- E. Recreation activities and facilities shall not adversely impact habitats which support state and federally threatened or endangered species.

Objective 4: Ensure that land use surrounding existing and potential County regional parks are compatible with park resources and public use.

Policies

- A. Areas surrounding regional parks should be maintained in open space or other compatible uses to protect the natural setting and environment of the park site.
- B. Land use development proposals adjacent to regional parks shall be reviewed for compatibility with natural and recreational features and uses of the park.

Objective 5: Encourage appropriate multiple uses of public land for recreation and other uses.

Policies

- A. The County shall make the optimum use of public lands by developing or promoting development of facilities that are compatible with the primary resources of the site.
- B. The County shall support passive and active recreational uses that are compatible with the primary resources of the land.

FACILITIES DEVELOPMENT

Solano County traditionally has limited its facilities development role to provision of regional parks. State policy also assigns a regional park development role to counties, with county development of community and neighborhood parks needed only where urban neighborhoods exist in unincorporated areas. In Solano County, under General Plan policies, all development at urban density is to be located in cities. The County has a modest sized rural residential population that is served by County regional parks.

The County has identified particular recreation needs that were determined by several means, including inventory of existing sites, state data, discussions with recreation providers in the County, and direct communication with members of the public through community forums. Emphasis should be placed on addressing those needs identified as having highest priority, including activities that cannot be totally accommodated within an urban setting. Consideration should also be given to the special needs of the elderly, physically impaired, and low-income persons in the planning, development, and operation of regional recreation facilities.

Located within Solano County are a number of significant natural resources including mountains, water bodies and marshes which, in addition to scenic enjoyment, may provide for recreational activities not usually available in developed parks. In the siting and development of regional recreation facilities, the County should consider natural resource features that may provide expanded recreational opportunities.

Consideration should also be given to assuring adequate access to regional recreation sites. Opportunities exist for providing trail and public transportation linkages between sites and population centers. Necessary support facilities to accommodate projected usage of recreational facilities must also be considered in facility development.

Finally, with limited funding available for acquisition, development and operation of regional parks, the County must find alternative funding sources.

Objective 6: Plan and develop regional recreational facilities which offer opportunities for a wide variety of activities.

Policies

- A. The County shall give development priority to recreation sites that can accommodate multiple activities that best address the identified recreational needs and take advantage of significant natural features that enhance the recreational experience.
- B. Water development plans/land use plans for the Belden's Landing facility and any new parks such as those proposed in the vicinity of Argyll Park and the Western Railroad Museum shall be consistent with the land use compatibility criteria of the Travis Air Force Base Land Use Compatibility Plan and the noise criteria under the Health and Safety Element.
- C. Recreational sites shall be designed and developed in a manner that enhances natural features and recreational use, and minimizes environmental impacts to the site and adjacent lands.
- D. The County shall consider the special needs of the elderly and the physically impaired in the design and development of recreational facilities.
- E. The County shall ensure adequate parking and non-vehicular access to recreational facilities.
- F. The County shall encourage the development of transit services between its recreational facilities and population centers.
- G. The County shall expand existing park revenue, seek new sources of funds, and explore innovative funding arrangements for developing and maintaining county recreational facilities.
- H. The County shall support facilities and activities that meet the needs of a culturally diverse population.

Objective 7: Provide for the regional recreation needs of the County.

Policies

- A. The County shall provide sites and opportunities for recreational activities that cannot be accommodated within urban areas, as funds and sites are available.
- B. The County shall encourage development of linkages (such as riding, hiking and biking trails) between population centers and regional recreation facilities. Any trail system which links parklands cannot conflict with agriculture and other land uses.
- C. Recreational needs of rural residents shall be considered in the design and development of rural residential subdivisions and parklands. Appropriate buffers will be provided to protect agriculture.
- D. The County shall provide technical assistance to organizations and groups who want to develop and/or operate regional parks and recreation facilities.

Objective 8: Accomplish all the projects included within the County Parks Capital Improvement Plan (see Appendix G).

Policies

- A. The County shall maintain a multi-year Parks Capital Improvement Plan and work to accomplish identified projects within the target completion dates.
- B. The County shall ensure that capital improvements are consistent with the Master Site Plan for each park, while also accommodating upgrades that meet legal requirements and urgent remediations.

PRIVATE RECREATION DEVELOPMENT

In Solano County, private recreation enterprises have played a role in providing recreational opportunities such as motorcross, picnicking, golfing and boating. More intensive commercial recreation opportunities such as bowling alleys, theaters, miniature golf and skating rinks are provided within urban areas.

Private enterprise can help to fill the growing need for recreation opportunities in Solano County. This can be accomplished through development of privately owned commercial recreation facilities, or through private development and operation of facilities and services within County and urban parks. It is important, however, to ensure that such private operations on County park land help to meet the needs of Solano County residents at affordable rates.

Objective 9: Encourage the development of private recreational areas within the unincorporated area, which complement public recreation facilities within the County. This may include privately developed campgrounds, golf courses, fishing lakes, etc.

Policies

- A. The County shall encourage privately developed recreational facilities that expand public regional recreation opportunities.
- B. Private recreation facilities should be located and designed in a manner that minimizes adverse impacts on surrounding residential, agricultural and open space uses.
- C. Intensive private commercial recreational developments may be confined to County urban areas if supporting public facilities and services are required.
- D. The County may provide for private concessions within County parks that do not adversely effect park resources, and provide a needed service for visitors at an affordable cost. Such concessions cannot conflict with the needs of adjacent agriculture and other land uses.

MANAGEMENT AND OPERATIONS

As stewards of public lands and other assets, it is important that the management of County regional parks is effective in protecting natural resources and facilities, and provide cost effective services. One method of providing cost effective facilities is by partnering with private and non-profit organizations.

Enjoyment of natural resources such as native vegetation, wildlife, and water requires careful management so that the resource is not denigrated by public use. Likewise, park facilities must be provided and maintained in a cost effective manner.

In California, there are documented “best practices” for the development and/or management of regional park resources. The County should regularly compare its management, operational standards, and techniques to ensure that they are consistent with “best practices” within the public parks and recreation profession.

Objective 10: Develop and maintain a park volunteer program to enhance volunteer services within regional parks.

Policies

- A. The County shall work with existing county volunteers and agencies operating regional parks to identify opportunities for volunteer services within regional parks.
- B. The County shall provide staff support to maintain an effective regional parks volunteer program.
- C. The County shall provide staff support for park advisory groups made up of frequent users, nearby property owners, community representatives and others for county operated parks.
- D. The County shall develop and maintain an "Adopt A Park" program.

Objective 11: Develop and maintain a marketing program to promote use of regional parks.

Policies

- A. In cooperation with other providers of regional parks within the County, the County shall identify the use capacity of each regional park.
- B. The County shall determine the costs and benefits associated with increasing the use of regional parks.
- C. The County shall provide adequate support to promote regional parks use when such use can be financially self-supporting.



Lake Solano Regional Park



Chapter Three

RECREATION TODAY

This chapter gives an overview of the provision of recreation opportunities in Solano County today. It includes a discussion of the roles of various governmental agencies, non-profit organizations, and private enterprise, in providing recreation, as well as a discussion and analysis of the current recreation facility inventory countywide.

ADMINISTRATIVE FRAMEWORK

In California, recreation plans, policies and programs are formulated and carried out by federal, state, regional, county and city government agencies and by special districts. Various governmental agencies provide recreational opportunities within Solano County.

Federal

The federal government does not operate any public recreation facilities within the County. However, they do own property within the County that has recreation value and potential. One example is property at Mare Island. In Rio Vista, the Coast Guard station may provide for additional recreation value at some point in the future. In addition to federal property within the County, federal recreation land facilities in adjacent counties provide recreation opportunities for Solano County residents.

State

The California Department of Parks and Recreation prepares and maintains a Statewide Recreation Plan that meets federal guidelines and serves as a guide for allocating recreational resources within the state. The department also maintains an assessment of current and projected recreation needs in California. These tools are used to help plan for state recreation facilities but are also available to local governments to assist their planning efforts. The Department of Parks and Recreation owns and operates the Benicia State Recreation Area and the Benicia Capitol State Historic Park in Solano County.

The California Department of Fish and Game provides opportunities for hunting, fishing and nature study on natural habitat in the Suisun and Napa Marshes, and along Putah Creek near Monticello Dam.

Regional

The Association of Bay Area Governments (ABAG) carries out regional recreation planning for the nine-county San Francisco Bay Area, which includes Solano

County. ABAG refers to its adopted recreation and open space goals and policies when reviewing local plans and project proposals, but ABAG does not build or operate its own recreational facilities.

The Bay Conservation and Development Commission (BCDC) is a state agency formed to preserve and protect San Francisco Bay and its shoreline. BCDC prepares and administers the San Francisco Bay Plan which includes recreation plans and policies for that portion of Solano County within its jurisdiction, generally the County shoreline from the western end of Island No. 1 east to Collinsville and including the Suisun and Napa Marshes.

Cities

Recreation departments in Solano County cities plan, develop and operate neighborhood and community parks, which is a traditional city role. Most of the cities also maintain some special activity facilities such as boat launch ramps, trails, historic facilities, community centers and baseball fields. Fairfield, Vacaville and Benicia each operate a regional size park. All of the cities in the County have recreation departments with the exception of Vallejo, which is served primarily by the Greater Vallejo Recreation District. The City of Vallejo does operate a municipal marina and a senior center, and contracts with private parties for the operation of its three golf courses. The City also administers numerous Landscape Maintenance Districts which contain important natural resources.

Special Districts

The Greater Vallejo Recreation District (GVRD) serves a 65 square mile area including incorporated Vallejo and some adjoining unincorporated areas. GVRD provides neighborhood and community parks, and special activity facilities.

County

County government has assumed an overall planning role for Solano County through the General Plan, which seeks to coordinate plans of the cities, the County and other entities which have an interest in the County, as well as to achieve some countywide goals such as the preservation of agriculture and maintenance of open space. The Park and Recreation Element, as an element of the General Plan, performs this overall planning function specifically in the area of recreation. Through the Park and Recreation Element, the County assumes a coordinating role among the various agencies and private entities which have direct roles in the provision of regional recreation in Solano County.

In addition to its overall planning and coordination role, the County develops and operates regional park facilities. At present the County operates regional parks at

Lake Solano on Putah Creek, Sandy Beach near Rio Vista, and Belden's Landing boat launch facility within the Suisun Marsh area. Since virtually all urban development in Solano County occurs in the incorporated cities, there is no foreseeable need for neighborhood or community parks in unincorporated areas. It is anticipated that the cities and GVRD will continue to provide neighborhood and community parks, and continue to operate their existing regional parks, while the County will provide for new regional facilities.

Solano Land Trust

This non-profit organization acquires and manages areas of significant resource values. Properties operated by the Trust are open to the public for recreational and educational purposes. The Trust works in cooperation with private land owners and government agencies in order to protect important open space within Solano County.

Tri-City and County Cooperative Group

This Joint Powers Authority (JPA) exists to protect and manage for public benefit the 10,000-acre Sky Valley-Cordelia Hills Open Space Project in southern Solano County. The JPA includes the cities of Benicia, Fairfield, and Vallejo and the County of Solano.

EXISTING FACILITIES

Table 1 shows total Solano County park acreage by type of facility and operating agency. The division of responsibility for different types of parks between cities and the County may be easily seen, as described under "Administrative Framework" above. One exception to the usual pattern is the substantial regional park acreage provided in cities. A definition of the terms used for describing types of parks will help the reader understand Table 1.

Definitions for Local and Regional Areas

Local Parks are typically operated by cities and recreation districts and may include the following:

Neighborhood Parks

- Serve as primary recreation resource for a neighborhood
- Service area is up to one-half mile walking distance
- Usually not more than 10 acres in size
- Limited to day use only.
- Limited or no off street parking
- No entrance fees

Community Parks

- Focus is on meeting the recreation needs of several neighborhoods
- Service area is up to three miles
- Optimal size is 15-20 acres, depending on usable space

- Developed for both active and passive uses
- Lighted outdoor facilities and indoor meeting area
- No entrance fees

Regional Parks are typically operated by counties or regional recreation districts and are generally described as follows:

- Serve two or more communities
- Service area is usually up to a one hour drive
- Natural or cultural resource is usually the basis for the park
- Minimal size is typically fifty acres
- Entrance or parking fees common

Regional Preserves are areas with outstanding natural or cultural features that are protected for their intrinsic value as well as for the enjoyment and education of the public. The essential feature of a Regional Preserve may be open space; wilderness; scenic beauty; flora; fauna; or archeological, historic or geological resources. The name of the preserve may reflect these features, e.g. Huckleberry Botanic Preserve. Generally, the size of a Regional Preserve is determined by the characteristics, nature and needs of its special features.

An Open Space Preserve will generally consist of at least 200 acres of undeveloped open space land within or bordering an urban area. An Open Space Preserve may be used for agriculture or for passive recreational activities that do not require substantial facilities or improvements.

Regional Recreation Areas provide a variety of outdoor recreation experiences on a site that is particularly well suited to the type of recreational activities. A Regional Recreation Area will be at least 40 acres in size, including both land and water area. The area must have established regional recreation facilities or the potential to provide the opportunities for regional facilities such as picnicking, swimming, fishing, camping and boating. The area must lend itself to development for a variety of uses that meet recreational needs, and it must be able to withstand intense public use.

Recreation/Staging Units are generally located near access roads on relatively flat land areas and along natural or artificial water bodies—areas that are suitable for more intensive public recreational use and are of sufficient size to support the necessary parking, utilities, and infrastructure needed for such use. Recreation/Staging Units include restrooms and showers, picnic areas, turfed meadows, interpretive facilities, play structures, camping facilities, equestrian facilities, meeting rooms, shelters, and aquatic facilities. Ideally, these areas are clustered and located at the edges of the parks, but they may be located within a park in special circumstances. Areas of higher level recreational use and concentrations of service facilities should be designated as Recreation/Staging Units. Where possible, these areas will be clustered and located on the edges of the park.

SOURCE: "Park, Recreation, Open Space and Greenway Guidelines," National Recreation and Park Association, 1996.

Table 1
Countywide Park Acreage Summary

	Neighborhood Parks	Community Parks	Regional Parks	State Recreation Areas	TOTALS
Cities*	499	481	1650		2630
County			229		228
State				367	367
TOTALS	499	481	1879	367	3225

* Includes parks operated by the Greater Vallejo Recreation District.

SOURCE: Parkland Inventory, November 2002, Solano County

Facility Inventory

A complete inventory of recreation facilities in Solano County is contained in Appendix A.

Facilities available at city parks are dominated by structured (baseball diamonds, basketball courts, soccer fields) and unstructured (open grassy area) playfields, playground equipment and picnic areas. Cities also typically have a community center, swimming pools, and other facilities.

County facilities include three regional parks offering recreation activities such as camping, picnicking, fishing, boating and swimming.

State facilities include a historic site, a day use recreation area, and wildlife areas. These lands, together with federal lands, provide the vast majority of nature study opportunities in the County.

Geographic Distribution

In general, recreation facilities and opportunities for specific activities are well distributed through the County. One exception is the Dixon area where city parks are the only recreation facilities available. The residents of this small city are well served, however, by two large community parks. The area surrounding Dixon is devoted almost exclusively to intensive agriculture, which offers visual open space value. There are no notable natural resources which would lend themselves to regional or state park development, and such parks could present potential conflict with agricultural operations such as aerial spraying.

It should also be noted that there are no County regional parks in southern Solano

County. This lack is mitigated, however, by the presence of the Benicia State Recreation Area which is operated by State Parks, and Lake Herman Park, which is operated by the city of Benicia.

Picnicking, swimming, playgrounds, structured and unstructured playfields and nature study areas are well distributed around the County. Boating and fishing are, of course, available only where there are suitable bodies of water in the Vallejo-Benicia, Fairfield-Suisun, and Rio Vista areas and at Lake Solano on the County's northern boundary. Camping is available at Sandy Beach Park and Lake Solano, as well as at private resorts in the Delta area near Rio Vista.

Jurisdictional Characteristics and Guidelines

Recreation and park standards commonly accepted in the past have called for 10 acres of city parks and 10 acres of regional parks for each 1,000 persons in the population. Experience in recent years has indicated that these acreage figures may be too high, and that acreage standards alone are not adequate for meeting recreational needs.

In 1996, national standards were replaced by suggested guidelines encouraging each county and community to establish its own acres-to-population park standards. This Park and Recreation Element recommends ten total acres of local and regional parkland for each 1,000 persons.

Private Facilities

Private recreation facilities in the County offer a somewhat different spectrum of activities from those in the public sector. For the most part this is to be expected, since private operators must charge users enough to meet expenses or make a profit, while most public facilities offer activities below cost or free. There is some overlap in the areas of swimming, fishing, boating, camping, and hunting but private facilities where these activities are available tend to offer additional amenities. Boat mooring facilities in the County are mostly private. Launch facilities, on the other hand, may be found at both public and private facilities. Campsites in the County are also provided by private and public operators.

Hunting, an activity that is especially popular in the Suisun Marsh, is carried out on public lands belonging to the Department of Fish and Game, as well as on the premises of numerous private clubs. These clubs offer the advantages of limited number of hunters, and often the comforts of a clubhouse and other facilities.



Chapter Four

RECREATION NEEDS

This chapter identifies present and projected recreation needs in Solano County through analysis of the user population coupled with the inventory of existing facilities described in Chapter Three. Needs for which the County was identified as a potential provider, and potential sites for needed facilities, are identified. Needs and sites are then matched, and non-facility need solutions such as programs to increase use of existing sites, are identified to form the basis for the plan proposals detailed in Chapter Six.

IDENTIFYING NEEDS

Several information sources were employed to determine recreation need characteristics of the Solano County population. These included population projections, demographic information, data from a statewide recreation survey, observations of local park and recreation providers, statements of need by members of the public, and public participation in a survey conducted via the Solano County web site.

Population and Recreation Characteristics

The 2000 Federal Census counted 394,542 persons in Solano County. This figure represents an increase of 159,339 persons or 40% since the 1980 Census, making Solano the fastest growing county in the San Francisco Bay Area in percentage terms. "Projections 2002" by the Association of Bay Area Governments predict this growth pattern to continue with 512,000 residents expected in Solano County by 2015 (see Appendix D). These figures clearly indicate that there will be a need for increases in recreation facilities and opportunities in Solano County during the planning time frame. This conclusion is further reinforced by state figures, which show that 70% of away-from-home activities occurs within an hour's travel time from home.

Projected Recreation Demand

State recreation survey data was used to project future demand for the San Francisco Bay Area. Activities for which the greatest number of participation days were recorded in 1993 were also the activities for which the greatest increase in participation days was projected. The top activities were swimming and beach related activities, walking, visiting scenic areas, and bicycling. The fastest growing activities in terms of percentage increases were projected to be hiking and backpacking, boating, nature appreciation, fishing and camping. The greatest amount of public support for new facilities included developed camping, trails for hiking, and nature study access.

Local Need Perceptions

In order to ensure that the Park and Recreation Element needs assessment reflects the specific needs of Solano County as accurately as possible, local park and recreation providers and more than 500 members of the public were surveyed. Each local recreation provider was asked what recreation needs he or she believed the county should address in its regional parks (see Appendix C).

Early in the recreation planning effort, approximately one hundred residents attended four public forums which were held to solicit input from the public (see Appendix B). In addition, the County included a Recreation Needs survey on its web site and received more than 400 responses. Needs expressed included improved public trails for hiking and biking, overnight camping, group picnicking areas, regional cultural facilities and areas of natural and historic value.

Needs Summary

The discussion of existing recreation facilities in Chapter Three indicated that there are existing shortages of park areas. The County also lacks an adequate trails system and there is a need for camping and other facilities typical of regional parks.

As the County population grows during the planning period, demand for the following activities is expected to be particularly great:

Group Camping	Family Camping
Trails	Group Picnicking
Visiting scenic/cultural places	

Other activities and facilities for which there may be a significant increase in demand include:

Sports fields	Regional sports complex
Boating	Equestrian trails
Nature appreciation	Off-road recreation

Problems inhibiting participation, which are of concern to the County in terms of planning, include the need for public transportation to recreation facilities, cost of participation, and poor accessibility for physically impaired persons.

MEETING NEEDS

This section considers means of meeting the County's recreation needs. Individual needs are analyzed and potential providers identified. Potential facility sites are identified and evaluated, and priorities for the Recreation Element Proposals are established.

Needs Analysis

Factors which must be considered in planning to meet Solano County's regional recreation needs include the magnitude of projected demand, specific nature of the needs, availability of suitable sites, institutional, land use and environmental constraints, geographic locality of the needs, range of appropriate providers, and funding considerations. Significant factors for each of the needs identified in the preceding section are discussed below.

A. Completion of Plans Developed by Local Agencies to Acquire and Develop Additional Parks - Local park and recreation agencies have plans for adding forty new parks totaling 606 acres (see Appendix E).

B. Regional Type Park in Southern County - The need for a regional type park in southern Solano County could, conceivably, be met by the 648 acre Lake Herman Park operated by the city of Benicia. Additional facilities would be needed.

C. Hiking/Biking Trails System - There are many existing trail segments in various parks throughout the County as well as bike lanes on many city streets. This element neither includes nor approves any hiking or biking system in Solano County. Any trail system which links parklands cannot conflict with agriculture and other land uses.

D. Sports - Sports facilities are typically provided by cities at neighborhood and community parks, and at school sites. Private facilities also serve a portion of the demand for some activities such as tennis, racquetball and bodybuilding. There appears to be a need for additional sports fields such as baseball and soccer.

E. Camping - Within the region, this high-demand activity is currently provided by the County, the state and the private sector. There is potential for additional development by local communities operating regional parks. Greatest demand is expected to be in the southern portion of the County because of its proximity to the Bay Area. Group camping needs can be met by developing adequate facilities for groups of 25 or more. Appropriate buffers can be provided between campsites and agricultural uses in the area.

F. Group Picnicking - Group picnicking, another high-demand activity, is more difficult to provide for since it typically requires assemblages of closely spaced tables, either trees or a shelter for shade, and large adjacent grassy areas for play. Potential for these facilities exists at regional parks and by acquiring additional land to expand existing parks.

G. Visiting Scenic or Cultural Places - This need encompasses a number of potential activities. Driving or hiking through scenic areas, visiting waterfronts and other points of interest, as well as visiting museums, historical sites and other cultural

facilities. In Solano County the marsh areas, the Vaca Mountains and the Vallejo-Benicia Hills provide areas of scenic beauty, which can be enjoyed through special visits as well as driving by. As the County grows it will be important to preserve these and other scenic areas. Cultural facilities in Solano County are not numerous but do include the Benicia State Capitol, the Vacaville Museum, the Mira Theater in Vallejo, the Vallejo Naval and Historical Museum, the Rio Vista Museum, the Pena Adobe, and the Western Railway Museum.

H. Boating - Boating facilities are presently provided by the County, the waterfront cities, the State Department of Fish and Game and by private resorts and marinas. New facilities, which will help to meet the projected increase in demand, may include Lagoon Valley Park and expansion of camping at Sandy Beach Park.

I. Nature Appreciation - Opportunities for nature appreciation are currently available at city, county and state facilities in Solano County. The need is not so much for additional acreage as it is for improved access and interpretive facilities. Improved facilities, as outlined in the Plan Proposals chapter, would assist with the access problem. Also, more interpretive facilities in the Suisun Marsh will be of assistance to the general public in understanding this unique area.

J. Off-Road Vehicles - There is currently an off-road vehicle facility at the privately owned and operated Argyll Park east of Travis Air Force Base. In addition, mountain biking is a popular activity at Rockville Hills Park in Fairfield.

K. Regional Sports Facility - Sports facilities are located in all cities within the County. A regional sports facility could be developed and operated by a public-private partnership program to meet the growing need for such facilities.

L. Equestrian Trails - Currently there are no public equestrian trails in Solano County. There is potential for development of such trails at Lake Herman, Mare Island, Rockville Hills Park and at the McIntyre Ranch area operated by the GVRD, as well as Lake Solano Park.

M. Low-Cost Facilities - Recreational facilities operated by public agencies in the County are presently free or at low cost. Fiscal pressures on all levels of government, however, create pressures to increase fees for many services and facilities. Care must be taken that public facilities remain affordable and accessible to all residents. This may require a combination of fee increases and cost-cutting techniques for park operations.

N. Facilities for the Physically Impaired - Recreation facilities open to the public, whether operated by public or private entities, are required by law to be accessible for the physically impaired. There is potential to develop nature walks and other facilities specifically designed for the physically impaired within new and existing parks in Solano County.

Potential Providers

Potential providers of facilities to meet the recreation needs include the cities, special districts, the county, the state and non-profit organizations. The County, in its role as coordinator, establishes policies supporting the roles of various entities in meeting recreation needs but the County has a more limited role in actual provision of facilities. Since little urban density development exists in the unincorporated area and none is projected for the future, the County limits its facilities role to the provision of regional parks and special activity facilities, which cannot be accommodated in the cities. The cities typically provide neighborhood and community parks, some special activity facilities and a few regional type facilities. The State of California has one historical facility and one recreation area in Solano County, in addition to its many acres of wildlife habitat in the marshes and along Putah Creek.

In many cases, several providers have appropriate roles in meeting needs and, for those items where greatest demand is expected, it will probably be necessary to draw on the resources of all potential providers to adequately meet demand.

County Plan Proposals

The basis for the Park and Recreation Element proposals was developed by prioritizing the regional needs for which the County has a leadership or provider role, and identifying appropriate projects for meeting the needs.

*High Priority**

- Hiking/biking trails
- Camping
- Group picnicking
- Facilities for the physically impaired
- Nature appreciation
- Historic appreciation

*Medium Priority**

- Fishing
- Off-road recreation
- Sports fields
- Equestrian trails

*Low Priority**

- Golfing
- Boating
- Swimming

* NOTE: Needs are not prioritized within groups.

Potential Facility Sites

Existing regional parks and sites which might be acquired and developed to help meet the County's priority recreation needs were identified and evaluated according to the following assessment criteria:

- Accessibility
- Proximity to major population centers
- Complements other area recreation facilities
- Potential land use conflicts
- Need for the facility in the area
- Expressed local desire for potential activities
- Cost of development
- Cost of maintenance
- Availability/cost of property
- Special features with recreational value
- Range of activities that can be accommodated

The following sites were found to have the most potential during the planning period:

- Lagoon Valley Park
- Benicia State Recreation Area
- Lake Herman Park
- Rockville Hills Park
- Sandy Beach Park
- Putah Creek public lands
- Western Railway Museum Area
- Lake Solano Park
- Argyll Park Area
- Belden's Landing
- Suisun Marsh Fishing Access Areas

All of the sites listed are shown on the plan map or discussed in Chapter Five: Plan Proposals.

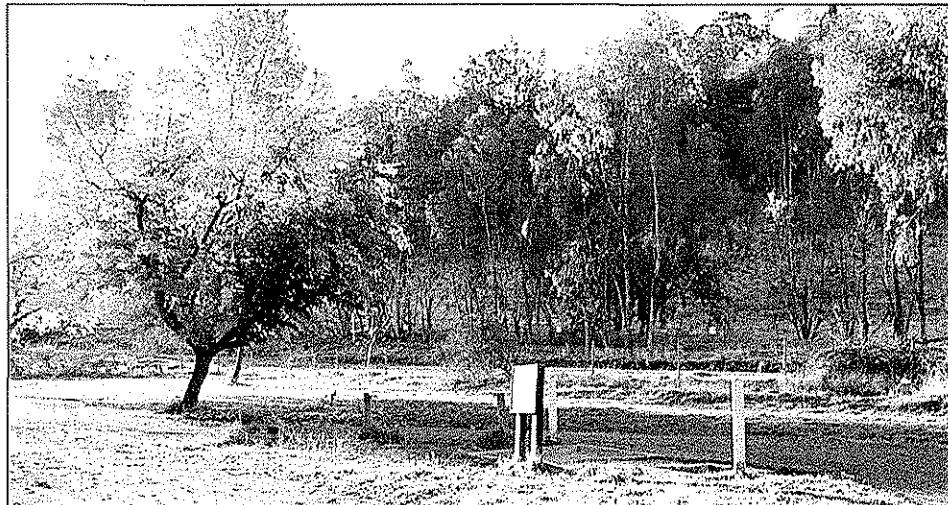


Chapter Five

PLAN PROPOSALS AND IMPLEMENTATION RECOMMENDATIONS

This chapter sets forth specific project proposals which are intended to protect, and maximize, the value of existing County park resources. These projects are also aimed at meeting identified regional recreation needs. As a group, the projects represent implementation measures for accomplishing the goals, objectives, and policies within the Park and Recreation Element. The proposals are not listed in any priority order but are organized into three categories: Planning, Acquisition and Development, and Management.

Each proposal is accompanied by rationale and a recommended lead agency, project timing, and a funding source. An Implementation Schedule is included on page 39.



Sandy Beach Regional Park

PLANNING

Proposal #1

Develop a Master Development/Use Plan for Sandy Beach, Lake Solano, and Belden's Landing County Parks.

Rationale

In order to protect existing resources and maximize public enjoyment of Solano County parks, it is important to identify and plan for future public use. Each site is unique and should have a Master Plan for new facilities and improved facilities. Each Plan would discuss the desirability and feasibility for changes within the park, as well as expansion opportunities and operational requirements. The Master Plan would provide recommendations and the estimated cost for rehabilitation of existing facilities, acquisition cost for additional land, the development and operation of new facilities. The preparation of Master Plans should involve participation from frequent park users, nearby property owners, governmental agencies and other interested parties. Master Plans will also provide guidance to County staff in the preparation of its multiple year Capital Improvement Program.

Lead Agency

Solano County Parks Division

Timing

Within one year of Element adoption

Estimated Cost

\$75,000 - 100,000

Funding Source

State Park Bond Funds

Proposal #2

Determine if a regional sports facility is needed and can be self supporting.

Rationale

Based upon the recreation needs assessment during the preparation of this Element, there appears to be public interest for providing a number of sports facilities in a centralized location. With the growing population and limited park space for sports fields within the urban areas, a regional sports facility of approximately 100 acres may need to be developed in the unincorporated area of the County. Such a facility would have several lighted fields for softball, baseball, soccer, basketball, and volleyball, and may also have indoor sports facilities. Such regional facilities have been developed in other regions of the state via partnerships between government and private interests. A feasibility study would help the County determine if this is a good idea to pursue.

Lead Agency

Solano County Parks Division

Timing

Within two years of Element adoption

Estimated Cost

County staff costs (unknown)

Consultant services (\$25,000-35,000)

Funding

Local government agencies

State Bond Funds

Private investment

Proposal #3

Develop a Resource Management Plan for each County park.

Rationale

The primary reason people are attracted to County parks is the availability of natural resources within and adjacent to the parks. It is critical that these natural resources are protected for future generations to enjoy. It is impossible to adequately protect these resources without an awareness and understanding of the presence, condition and vulnerability of each natural resource. For example:

- To what extent are invasive plants taking over native vegetation?
- To what extent has, or may, public use impact upon the habitat for wildlife?
- What can be done to manage the parks so that natural resources can be protected and enhanced?
- To what extent is erosion damaging natural resources and park infrastructure?

Resource management plans would provide park managers with vital information about existing resources and guidelines for how best to manage such resources.

Lead Agency

Solano County Parks Division

Timing

Within one year of Element adoption

Estimated Cost

\$40,000-50,000

Funding

Solano County General Fund

State or federal grants

ACQUISITION AND DEVELOPMENT

Proposal #4

Develop a regional park near Argyll off-highway vehicle park, Jepson Prairie Preserve, and the Nature Conservancy property. This area is east of Travis Air Force Base and adjacent to Highway 113.

Rationale

Although these areas are privately owned and operated, they are open to the public on a limited basis. In combination, these sites provide for a variety of recreational and educational uses. A county day use park could enhance public access and enjoyment of these diverse areas. For example, facilities could be developed which would support picnicking, informal sports and games, walking, biking, resource interpretation, fishing, and more. Also, necessary support facilities such as restrooms and parking would be developed within the county park. Unlike existing county parks, a regional park in this location would be centrally located, and easily accessible because of its proximity to Highway 113.

Lead Agency

Solano County Board of Supervisors

Timing

Within five years of Element adoption

Estimated Cost

To be determined

Funding Source

State Park Bond Funds

Federal Land and Water Grant Program

Proposal #5

Develop a regional park near the Western Railroad Museum.

Rationale

The Western Railroad Museum is a significant tourist site within the County. In addition to being a destination for many visitors, the museum receives significant visitation because of its location on a heavily traveled state highway. In addition to the museum itself, the Western Railroad Museum includes a ten-mile train ride as part of the museum entrance fee. The support facilities for the museum are a gift shop, restrooms, parking and a modest-sized picnic area.

The development of a regional park in the vicinity of the museum could provide recreation facilities that would probably enhance museum visitation and enjoyment. For example, a group picnic area and playfields within a new county park would attract large groups. A visit to the museum could be the highlight for such groups using the county park. A new County park in the area would be developed in cooperation with the museum so that there would be mutual benefits for the County and the Western Railroad Association.

Lead Agency

Solano County Board of Supervisors

Timing

Within five years of Element adoption

Estimated Cost

To be determined

Funding

State Park Bond Funds

Federal Land and Water Grant Program

Proposal #6

Develop a trail that connects Sandy Beach County Park with downtown Rio Vista.

Rationale

Sandy Beach County Park is within walking and biking distance of downtown Rio Vista and its waterfront area. It would be desirable if park users could enjoy a safe and aesthetically pleasing route between the park and downtown. Such an experience would add to the recreation options available to park users as well as contribute to the tourism goals of the city. The city has already recognized the value of such a connection in the Open Space and Recreation Element of their General Plan which states: Policy G.1.E "The creation of such a trail would required the cooperation of the city, the federal government and any other entities who may own land or be impacted by the proposed pedestrian/biking trail." The County would work in conjunction with the City and Coast Guard on the proposed trail.

Lead Agency

Solano County Parks Division

Timing

Within four years of Element adoption

Estimated Cost

To be determined

Funding

Local, state and federal funds

Proposal #7

Expand the day use area at the Belden's Landing facility, and evaluate the feasibility of adding a campground.

Rationale

The Belden's Landing facility is located on Grizzly Island Road in the Montezuma Slough area. The park, which opened in 2002, has become very popular with boaters, fishermen and others because of its excellent facilities and access to Suisun Bay. Because of its popularity, the current parking and related facilities cannot accommodate the visitation.

Because of the popularity of this site and the lack of overnight camping facilities in the area, the County should consider the feasibility of developing a campground on adjacent land. Because of the revenue vs. operating cost of an expanded park this project would be a prime candidate for a partnership between the County and a private park developer/operator.

Lead Agency

Solano County Parks Division

Timing

Within three years of Element adoption

Estimated Cost

Parking expansion \$150,000-200,000

Campground expansion \$500,000 - 1,000,000

Funding

State Park Bond Funds

State or Federal Grants

Private Investor

Proposal #8

Expand Lake Solano County Park camping facilities by using nearby public lands.

Rationale

Lake Solano County Park is very popular for camping and water-oriented day use recreation activities. During the summer months, the campground is usually full on weekends and holidays (Easter, Memorial Day, Fourth of July, and Labor Day). Further, all of the campsites are individual sites which do not lend themselves to group camping.

In order to meet the demand, and increase revenue from camping, additional campsites are needed. There are two sites which are well suited to support new campgrounds. The first is a 15-acre site located between Putah Creek and Highway 128 below the Monticello Dam west of the park. This property is part of a larger parcel which is owned by the California Department of Fish and Game. The site is presently used for hiking and fishing access to Putah Creek. The County could enter into a use agreement or seek a land transfer from the state.

The other recommended site is the 6-acre Solano Irrigation property located west and immediately adjacent to the existing park campground. This property provides an excellent location for new group or individual campsites.

Lead Agency

Solano County Parks Division

Timing

Within three years of Element adoption

Estimated Cost

To be determined

Funding Source

State Park Bond funds
Federal grant funds
Private developer/operator

MANAGEMENT

Proposal #9

Work with public agencies to solve the silt problem at Lake Solano County Park.

Rationale

The siltration build up on Putah Creek adjacent to the County Park is causing a negative impact on the park resources and recreation uses. Historically, Putah Creek in this location has been 7-8 feet deep; however, it is currently about 2-4 feet deep. As the water becomes shallower, it becomes warmer which results in an increase growth of algae. Algae growth can be harmful to aquatic life and humans engaging in water contact activities. The creek is located on federal land (Bureau of Reclamation) as is most of the County Park. The integrity of its water source is important to the Solano Water Agency (SWA).

Although it would be very expensive to dredge the entire creek (reportedly \$50 million dollars), less expensive methods should be explored with government agencies and others who have an interest in the water quantity and quality of the creek. The County should initiate discussions with the Bureau of Reclamation and the SWA to encourage the development of a strategy for the future protection of Putah Creek and its recreation use for visitors to Lake Solano County Park. Once a strategy is adopted, the County should assist to the extent of its capability.

Lead Agency

Solano County Parks Division

Timing

Initiate discussions and planning within one year of Element adoption.
Implementation of strategy within two years of Element adoption.

Estimated Cost

Phase I - County staff costs.
Phase II - To be determined

Funding Source

Phase I - County General Fund
Phase II - To be identified

Proposal #10

Evaluate the County Park Fee Schedule, implement needed changes, and identify other revenue generators.

Rationale

The only method the County has to off-set the cost of operating its parks is through fees received from park users. Currently, the County collects approximately 50% of what it cost to operate its regional parks. These parks are very popular, and at times, demand exceeds capacity. Public agencies and private interests also offer similar facilities and services within the region. It is important that the County charge fees which are comparable to other providers, and to reduce the need for subsidy from the County General Fund.

In addition to existing fees, an analysis should be conducted to determine if new fees should be added for services which are now free. Examples would include dump station fees and on-site registration fees. Also, the County should consider charging higher fees for premium camp sites, and during peak seasons and days.

As an example, an increase in fees and new fees could substantially off-set the need for subsidy at Lake Solano Park. Approximately 24,000 vehicles enter this park each year. An increase of only two dollars per car would result in \$48,000 (assuming no change in visitation). Additional revenue could be generated at this park during peak seasons/days when the campground demand exceeds capacity. Fees should be reviewed annually and adjusted as needed.

Lead Agency

Solano County Parks Division

Timing

Within one year of Element adoption and annually thereafter

Estimated Cost

\$20,000 - 35,000 (includes market analysis, and costs to implement changes)

Funding Source

Solano County General Fund

Proposal #11

Investigate the feasibility of creating a Joint Powers Agreement for County Parks management.

Rationale

The three existing County parks are each located on or near federal or state lands. Also, in each case, other governmental agencies manage nearby recreation areas that offer services and facilities that are similar to the County parks. It is important that each government agency coordinates with one another to maximize public service, minimize duplication of facilities, and have similar use fees and policies. One way to help insure the best public services at the least cost may be to create a Joint Powers Agreement between all the government agencies. The Agreement would provide guidelines that all agencies would follow in the planning, development and management of public recreational facilities and services.

Lead Agency

Solano County Board of Supervisors

Timing

Within one year of Element adoption

Estimated Cost

County staff costs (unknown)

Funding

Solano County General Fund

Proposal #12

Work with public agencies to solve the sand/siltation intrusion problem at Sandy Beach County Park.

Rationale

Sand and silt intrusion from the Sacramento River is causing multiple problems at the Regional Park. During peak park visitation over the summer, the boat ramp is unusable because it is covered with sand and is too slippery for boat launching. Also, the sand buildup prevents boaters from using the boat dock, and prevents park visitors from fishing from the dock.

The County does not have adequate staffing to keep the boat launch clear. The loss of this important recreation facility during the summer and at other times results in reduced visitation and park fee income. Solving the boat ramp siltation problem should be researched with the California Department of Boating and Waterways, the U. S. Coast Guard, and the Army Corps of Engineers. The construction of wing dams, purchase or rental of specialized equipment, or a contract to have silt removed at peak use times should be considered.

Lead Agency

Solano County Park Division

Timing

Within five years of Element adoption

Estimated Cost

To be determined

Funding

Federal and state grants

Proposal #13

Consider the creation of a Countywide Regional Park District.

Rationale

Adequate funding to manage, develop, redevelop, and expand the existing County park system has not been available from the County General Fund or from park revenue.

Implementation of the goals, objectives, policies, and proposals within this Element will require funding well beyond what has historically been provided. In addition, open space and regional recreation areas managed by others could become part of the County park system. Considering the ongoing pressure on the General Fund, it is imperative that the County explore optional means to adequately fund a system of regional parks.

An alternative that has been used in other counties is the creation of a special district for the acquisition, development and operation of regional parks. In addition to providing a designated funding source, a Regional Park District could do the following:

- Provide adequate funding to accomplish the goals, objectives, and proposals within this Element.
- Consistently identify the changing outdoor recreation needs within the County and provide the information to recreation service providers.
- Actively participate in regional planning matters that have a relationship to regional parks and services.
- Improve and expand existing County park sites.
- Operate regional park resources now managed by other organizations and agencies, i.e. government agencies and non-profit groups.
- Actively seek legislation and funding that benefit the goals of the District.
- Increase public support for improving the environment by preserving and interpreting natural resource areas.
- Enter into shared use agreements with property owners who are open to multiple use of their land, i.e. water, flood control, other agencies and owners.
- Provide technical assistance and information services to those who provide recreation services which attract regional use.

There are alternative ways by which a regional park district can be established within State law (Section 5500 of the California Public Resources Code). Although there are several steps involved, it has been demonstrated on a statewide basis that the public generally supports the acquisition, development, and management of regional parks.

Lead Agency

Solano County Board of Supervisors

Timing

Complete feasibility study within one year of Element adoption

Estimated Cost

\$25,000 for county staff costs or consultant services

Funding Source

Solano County General Fund

Proposal #14

Evaluate the desirability and the feasibility of owning and/or operating the areas listed below as part of the Solano County Regional Park System.

Rationale

As discussed within the Park and Recreation Element (pages 6-8), there are several areas within Solano County that have significant resource values and recreation use potential. It is the responsibility of the County to evaluate these areas in cooperation with the applicable agency to determine if they should be made part of the County Park System, or operated by the County under some type of a management agreement. Further, during the development and review of the draft Park and Recreation Element, interested citizens asked that these sites be considered.

Sites To Be Evaluated

Lagoon Valley Park - This is a 360 acre regional park located adjacent to Interstate 80 in the south-western corner of Vacaville. The park is owned and managed by the City of Vacaville, and supports a variety of day use recreation activities.

Vallejo Lakes Watershed - The City of Vallejo owns 2,700 acres of land surrounding Lakes Madigan and Frey which are in west central Solano County. Access to the areas is via Green Valley Road. There is currently no recreation development on the property, and access is restricted to City personnel.

Benicia State Recreation Area - This is a 367 acre facility lying on Southampton Bay between Vallejo and Benicia. Interstate 780 borders the area on the north and east, while the bay is to the south. The site is managed by the State Department of Parks and Recreation and is used for day use recreation activities.

River Park - The park site is located on the eastern bank of the Mare Island Strait just south of the Highway 37 Napa River overpass. The area is undeveloped and includes about 20 acres of salt-water marsh and 55 acres of dredge spoils. The Greater Vallejo Recreation District is the proposed developer/operator of the park.

Suisun Marsh Fishing Access - There are several sites within the Suisun Marsh which have been identified as possible fishing access areas. These include Potrero Hills ditch, Cordelia-Goodyear ditch, Boyton-Cordelia ditch, cutoff slough, Grizzly Island, and the Montezuma Slough Wildlife Area. Some of these areas are already used for fishing access but additional facilities and management are needed.

Putah Creek Fishing Access - This 15 acre site is located between Putah Creek and Highway 128 just below the Monticello Dam. The site is managed by the State Department of Fish and Game, and is used for day use activities such as fishing, hiking, and nature study.

Sky Valley-Cordelia Hills Open Space - Located in southern Solano County in the triangle formed by Interstate 80, 680 and Lake Herman Road, this 10,000 acre area could provide many recreation and resource preservation benefits. The cities of Fairfield,

Benicia, Vallejo, and Solano County have formed a Joint Powers Authority to help the Solano Land Trust acquire this area for public benefit.

Jepson Prairie Preserve - Located between Travis AFB and Highway 113, this 1,566 acre preserve has some of the best remaining vernal pool/native grassland ecosystems in California. The preserve is managed by the Solano Land Trust and is open to the public during daylight hours.

Rush Ranch - An operating cattle ranch containing 2,070 acres. The preserve is located on Grizzly Island Road east of the City of Suisun City. The ranch has both natural and cultural resources which are being preserved and interpreted by the Solano Land Trust.

Lynch Canyon - This site is owned and managed by the Solano Land Trust. The area includes 1,039 acres of rolling hills and grass lands, with spectacular views of the North Bay. Guided hikes are provided by the Trust.

Lake Herman Park - This is a 648 acre park located on the northern edge of the City of Benicia adjacent to Lake Herman Road. The park is owned and maintained by the City of Benicia. It contains a 22 acre lake which serves as a supplemental water source for the City. The park provides for such day use activities as fishing, picnicking, and hiking.

Rockville Hills Park - The park is a 495-acre site on the south side of Rockville Road between Green Valley and Suisun Valley. The site is primarily hilly, with attractive foothill vegetation and a 5-acre lake. It is primarily used for hiking and mountain biking related activities. The site is owned and operated by the City of Fairfield.

Liberty and Prospect Islands - These islands are located on the eastern edge of Solano County north of the City of Rio Vista. These islands have been proposed for a National Wildlife Refuge; however, this proposal is on hold. The Delta Protection Commission has asked that the County consider operating these islands for such recreation uses as hunting, fishing, non-motorized boating, and wildlife observation.

Mare Island Regional Park - This 172-acre area is at the southern most end of the island and has been proposed as a regional park. Possible uses of the site include walking, biking, and horse trails. Potential passive uses include wildlife viewing and eco-recreation.

Lead Agency
Solano County Parks Division

Timing
Within one year of Element adoption

Estimated Cost
County staff costs (unknown)
Consultant services (\$35,000-50,000)

Funding
Solano County General Fund
State or federal grants

IMPLEMENTATION SCHEDULE

Proposal

Target Completion Date

		FY 03-04	FY 04-05	FY 05-06	FY 06-07	FY 07-08
1	Develop a master development/use plan for Sandy Beach, Lake Solano, and Belden's Landing County parks.	X				
2	Determine if a regional sports facility is needed and can be self supporting.		X			
3	Develop a Resource Management Plan for each County park.	X				
4	Develop a regional park near Argyll off-highway vehicle park, Jepson Prairie Preserve, and the Nature Conservancy property.					X
5	Develop a regional park near the Western Railroad Museum.					X
6	Develop a trail that connects Sandy Beach County Park with downtown Rio Vista.				X	
7	Expand the day use area at the Belden's Landing facility and evaluate the feasibility of adding a campground.			X		
8	Expand Lake Solano County Park camping by using nearby public lands.			X		
9	Work with public agencies to solve the silt problem at Lake Solano County Park		X			
10	Evaluate the County Park Fee Schedule, implement needed changes, and identify other revenue generators.	X				
11	Investigate the feasibility of creating a Joint Powers Agreement for County Parks Management.	X				
12	Work with public agencies to solve the sand/siltation intrusion problem at Sandy Beach County Park.					X
13	Consider the creation of a countywide Regional Park District.	X				
14	Evaluate the desirability and the feasibility of owning and/or operating the areas listed as part of the Solano County Regional Park system.	X				



Chapter Six

IMPLEMENTATION ALTERNATIVES

This chapter summarizes the major concepts of the Park and Recreation Element, defines the implementation roles of the Park and Recreation Commission and the Planning Commission and describes alternative implementation tools.

CONCEPTUAL FRAMEWORK

The central concept of the Park and Recreation Element is found in its orientation toward meeting unmet regional recreation needs. The element finds that Solano County has particular recreation needs both present and future that relate to all segments of the population. The Element should function to help fulfill these needs.

A number of sub-concepts or themes give shape and definition to the Park and Recreation Element. The County is found to have two major roles in relation to recreation. The first of these is an overall coordinating role among the various entities which provide recreation facilities and services in the County. The second role is the County's function as provider of regional recreation facilities and services which cannot be provided by other public agencies. Cooperation, including formal agreements, between the County and other agencies or private parties is emphasized as a means of enhancing recreational development and services.

The Park and Recreation Element seeks to protect existing regional recreation and natural areas. Intensive recreational uses are to be provided in cities and by private recreation providers. The element stresses the need for economy in planning, development and operation of recreational facilities, and proposes multiple uses of land and facilities to provide additional recreational opportunities. The Element also emphasizes the need for maintaining compatible land use patterns adjacent to recreation sites and facilities, and developing and operating facilities in a manner which avoids or mitigates impacts to adjoining landowners.

IMPLEMENTING BODIES

Park and Recreation Commission

The Park and Recreation Commission is the key to implementation of the Park and Recreation Element. In its capacity as an advisory body to the Board of Supervisors, the Park and Recreation Commission can initiate and pursue needed programs and projects by recommending actions to the Board. The Commission can also recommend actions to improve park operations, cooperative agreements with other agencies, and other actions which carry out Element objectives and policies.

The Park and Recreation Commission advises the Planning Commission as to appropriate recreation requirements in new subdivisions. The Commission may also review new development proposals, which may affect Park and Recreation Element implementation and offer recommendations to the Planning Commission. Proposals for new recreation facilities and development proposals, which could affect designated recreation sites, are appropriate subjects for review.

Planning Commission

The Planning Commission also bears an important share of the responsibility for implementing the Park and Recreation Element. Since the Element is part of the General Plan, the Commission must find new project proposals to be in conformance with the Park and Recreation Element before they can be approved. The Planning Commission is also responsible for considering Park and Recreation Commission recommendations as to recreation requirements in new subdivisions.

IMPLEMENTATION TOOLS

The specific actions used by implementing bodies to carry out proposals of the Park and Recreation Element fall into a few categories, which are discussed here as the implementation tools of the plan.

Capital Expenditures

Capital expenditures are the most important means of carrying out park acquisition, development and re-development proposals. They can be used to refurbish existing and developing new facilities including parks and trails, as well as to protect key natural resources through purchase of title or development rights. Included as Appendix F is a description of funding mechanisms that have been used in California to support park improvement projects and operational costs.

Regulatory Authority

The County can use its regulatory authority to carry out plan objectives through application of appropriate general plan designations and zoning, setting planned unit development (PUD) standards, design review of project proposals, recreation or open space dedication requirements and environmental review.

Administrative Actions and Institutional Changes

These actions deal primarily with funding considerations including development of funding sources and institution of operational efficiencies. Some actions, such as obtaining grant funding and taking advantage of free labor sources, can be taken directly by the Park and Recreation Division. Other actions, such as fee increases, require approval from the Board of Supervisors.

Interagency Agreements and Coordination

Agreements between the county and other government agencies or private parties may be negotiated to enhance provision of recreation opportunities. Cooperative facility development, interagency maintenance contacts and joint use of facilities are examples.

Advocacy

The County can actively encourage recreation developments by others that carry out objectives and proposals of the Park and Recreation Element. Actions can include requesting funding for development of specific facilities by the state and federal governments, as well as seeking support from other sources.

Support for Actions and Programs of Other Agencies

The County can provide support for facility development and other actions and programs of other agencies and private parties, which advance the goals of the Park and Recreation Element. Examples of such support are provision of letters of support for grant applications and resolutions of support by the Board of Supervisors.

Project Review

Projects proposed by other public agencies and by private individuals that could affect Park and Recreation Element implementation may be reviewed and comments provided. Projects to be reviewed could include development proposals, annexations, general plan and zoning changes, new city general plan elements, specific plans and area plans.

IMPLEMENTATION PROGRAM

Specific proposals and recommendations for implementation are included within Chapter Five: Plan Proposals.

APPENDIX A: PARK AND RECREATION FACILITY INVENTORY

Agency	Type of Facility	Number of Existing Facilities	Number of Proposed Facilities	Existing Acreage	Proposed Acreage	Hiking Trails	Group Camping	Group Picnic	Golf	Nature Study	Swimming	Fishing	Mountain Biking	Equestrian	Boating	Historical	Other
City of Benicia	Neighborhood Parks	20	4	66.5	22.5							x					
	Community Parks	1		50		x		x									
	Regional Parks	2		577		x		x		x		x	x		x		
	Special Activity Facilities										x					x	
City of Dixon	Neighborhood Parks	2	3	9	13												
	Community Parks	2	1	75	15												
	Regional Parks																
	Special Activity Facilities																
City of Fairfield	Neighborhood Parks	14	7	160	61												x
	Community Parks	2	2	74	105	x		x			x						x
	Regional Parks	1		610		x		x		x		x	x				x
	Pocket Parks	3	1		.5					x	x	x					x
	Special Activity Facilities					x				x	x	x	x				x
	Natural Environment Areas	4		773		x				x	x						

APPENDIX A: PARK AND RECREATION FACILITY INVENTORY

Agency	Type of Facility	Number of Existing Facilities	Number of Proposed Facilities	Existing Acreage	Proposed Acreage	Hiking Trails	Group Camping	Group Picnic	Golf	Nature Study	Swimming	Fishing	Mountain Biking	Equestrian	Boating	Historical	Other
City of Rio Vista	Neighborhood Parks	4	3 ac/ 1,000 11	5.1	3 ac/ 1,000 35.4			x									x
	Community Parks	2	2 ac/ 1,000 16	6.4	2 ac/ 1,000 33	x		x									x
	Regional Parks																
	Special Activity Facilities																
Suisun City	Neighborhood Parks	6	3	33	30.2										x		
	Community Parks	1		10				x									
	Regional Parks	1		79.8													
	Special Activity Facilities	2		5								x					
City of Vacaville	Neighborhood Parks	24	7	131.3	46			x									
	Community Parks	6	3	98.5	127	x		x								x	
	Regional Parks	1		306		x		x			x	x	x	x	x		
	Special Activity Facilities	17	1	N/A	N/A						x						x
	Natural Environment Areas	5		2000													

APPENDIX A: PARK AND RECREATION FACILITY INVENTORY

Agency	Type of Facility	Number of Existing Facilities	Number of Proposed Facilities	Existing Acreage	Proposed Acreage	Hiking Trails	Group Camping	Group Picnic	Golf	Nature Study	Swimming	Fishing	Mountain Biking	Equestrian	Boating	Historical	Other
City of Vallejo/ Greater Vallejo Recreation District	Neighborhood Parks	18		86.1						X							
	Community Parks	7		92.8						X		X					
	Regional Parks	2	3	95	95	X				X		X		X	X		
	Special Activity Facilities	7		8.9								X					
	Natural Environment Areas	1		20?		X				X							
Solano County	Regional Parks	2		213													
	Special Activity Facilities	1		10		X	X	X		X	X	X			X	X	
	Natural Environment Areas									X		X			X		
State Dept. of Parks & Recreation	State Recreation Areas	1		376													
	Special Activity Facilities																

APPENDIX B: COMMUNITY MEETINGS FOR SOLANO COUNTY PARKS

The information below was distributed in a flyer and press release in September 2002.

Solano County Parks Manager Tony Norris has announced that the County has begun the process of updating the Park and Recreation Element of the County General Plan.

Your comments and participation are vital to achieve a park system that truly reflects the wants and desires of our community and the entire Solano County. The new plan will provide the County with guidance for the acquisition and development of regional recreation facilities to meet the needs of current and future residents.

Four separate opportunities to meet with County representatives have been planned. Please consider joining the discussion at one of the following meetings:

October 7, 2002 7:00 p.m.	Dan Foley Cultural Center, Vista Room Dan Foley Park, 100 Setterquist Drive, Vallejo
October 16, 2002 7:00 p.m.	Joseph A. Nelson Community Center 611 Village Drive, Suisun City
October 24, 2002 7:00 p.m.	McBride Senior Center 411 Kendal Street, Vacaville
October 29, 2002	City Council Chambers Main Street, Rio Vista

For more information about the park planning project, call Jack Harrison at the Solano County Department of Environmental Management at (707) 421-6765.

Public Input Sought for County Parks

Solano County is currently updating the Park and Recreation part of the General Plan. This new plan will provide the County with guidance for the acquisition and development of regional recreation facilities to meet the needs of current and future residents.

In addition to the public feedback meetings held during October, the County has developed a survey that solicits public opinion on the plan. With the feedback from the meetings and survey, we will be able to achieve a park system that truly reflects the needs of Fairfield and Solano County.

The survey, which takes just a few minutes to complete, is available online at www.solanocounty.com under "What's New." The public is invited to comment now through November 14th.

For more information, contact Jennifer Kaiser at the number above, or Jack Harrison at (707) 421-6765.

APPENDIX C: RECREATION PREFERENCE SURVEY & RESULTS

The numbers below are the result of surveys distributed at the public forums and on the Solano County web site in October and November 2002. Approximately five hundred responses were received.

Listed below are a series of recreation activities that may occur in a park. Please prioritize your preference for each: after each activity, indicate how important these are to you, that is, in which ones you would be most likely to participate.

H = highly important

M = moderately important

L = least important

Hiking	70	Boating (non-motorized)	15
Nature appreciation	68	Horseback riding	14
Bike riding on paved roads/trails	62	Shooting	11
Historical appreciation	51	Boating (motorized)	10
Regional cultural events	43	Archery	9
Group picnicking	42	Golfing	8
Fishing	29	Hunting	8
Camping (no utilities)	26	Off-road vehicles	8
Camping (hookups)	25	Bird watching	6
Swimming (open water)	25	Dog park	5
Bike riding off pavement	23	Model airplanes	5
Group camping	23	Model boats	4
Regional sporting events	16	Hang gliding	2

The numbers above represent scores for ranking as "highly important."

APPENDIX D: SOLANO COUNTY DEMOGRAPHICS SUMMARY

	1980 Census	2000 Census	Difference	2015 * Projected	Difference Projected
Total Population	235,203	394,542	159,338 +68%	512,000	117,458 +30%
Age Group					
0-17	27%	28%	1%	n/a	n/a
18-34	32%	23%	-9%		
35-54	22%	31%	9%		
55+	19%	18%	-1%		

SOURCE: "Projections 2002," Association of Bay Area Governments

APPENDIX E: SOLANO COUNTY EXISTING AND PROPOSED PARKLAND

	Existing	Proposed	Total
Neighborhood Parks	68 (499 acres)	31 (220 acres)	99 (719 acres)
Community Parks	23 (481 acres)	8 (291 acres)	31 (772 acres)
Regional Parks	8 (1876 acres)	1 (95 acres)	9 (1971 acres)
State Parks	1 (367 acres)	0	1 (367 acres)
TOTALS	100 (3223 acres)	40 (606 acres)	140 (3829 acres)

SOURCE: Parkland Inventory, November 2002, Solano County

APPENDIX F: FUNDING FOR COUNTY PARKS AND RECREATION

COUNTY PARK GENERATED REVENUE

The County, through its operation of three regional parks, generates a significant amount of revenue which offsets the net County cost for operating its park system.

Fees are collected for day use, boat launching, camping, and other uses. The County also generates revenue from persons and companies who operate concessions within the park and who may rent group facilities.

When setting park user fees, the County should be competitive and consider the cost of providing services and affordability for its residents.

TAX-BASED FUNDING

Tax-based funding includes special purpose sales taxes, parcel taxes, transient occupancy taxes, real estate transfer taxes, Benefit Assessment District charges, Mello-Roos Community Facilities District Special Taxes, and property tax overrides to support a General Obligation Bond. With the exception of the Benefit Assessment District, each of these sources of funding requires a two-thirds majority vote.

Special Purpose Sales Tax. An additional countywide sales tax could be levied on top of the existing sales tax base to pay for park and recreation facilities. The stream of revenue from such a tax could be used to pay off debt from a bond issuance or used annually as revenues accrue. The passage of a sales tax measure would require a two-thirds majority vote of residents.

Pros

- Sales tax can provide a substantial amount of funding.
- Funds can be used for any approved purpose.
- May be more palatable to voters than property-based taxes or assessments.
- Can be used for regional park projects and operations.

Cons

- Sales taxing capacity under law may not be available in Solano County.
- May be seen to compete with other needs that traditionally seek this funding source.
- Requires two-third voter approval.

Annual Funding Example

A countywide 0.125% tax increase could generate about \$5 million each year in early years after adoption. Annual revenues would likely increase over time as taxable sales increase.

Special Purpose Parcel Tax. A flat per-parcel tax places a set amount of additional tax on every parcel in the subject area. It could be levied countywide.

Pros

- May be easy for the voters to understand.
- Increased revenue as parcels appreciate in assessed value and new parcels are created.

Cons

- Requires two-thirds voter approval.
- May be viewed as unfair because it is not based on benefit, i.e. land owners vs. renters.
- Not tied to inflation so relative amount of funding would be reduced over time due to inflation.

Annual Funding Example

There are currently about 125,000 parcels in the County, so a \$40 per parcel tax would generate about \$5 million annually. Over time, additional parcels may be created.

Special Purpose Real Estate Transfer Tax. A real estate transfer or conveyance tax is a tax levied on the sale of property that increases with the value of the property being sold. The cost can be borne by either the seller or the buyer. Tax rates and dispositions vary from state to state. California has a property transfer tax of \$1.10 per \$1,000 in assessed value, with \$0.55 allocated to the City for general purposes and \$0.55 to the County for general purposes. An additional real estate transfer/conveyance tax could also be established for special purposes through a two-thirds vote.

Pros

- If set at a high enough rate, real estate transfer taxes can create significant funds for park and recreation, particularly in fast-growing communities/counties.

Cons

- Revenues fluctuate with the real estate market.
- Voter approval has proven to be a stumbling block in some communities.
- Requires two-third voter approval.

Annual Funding Example

Revenues from this tax will vary with the real estate cycle. Revenue estimates were made under a series of conservative assumptions. Under a \$2.00 per \$1,000 of property value turned over, a total of \$2 million could be generated each year.

Mello-Roos Community Facilities District Special Tax. A Mello-Roos places a special tax on an area to finance authorized community facilities and services. The cities within Solano County have created Mello-Roos Community Facility Districts to pay for park development and maintenance. Mello-Roos Districts tend to encompass large development projects and require a two-thirds majority vote of landowners.

Pros

- Can cover a specific, limited area.
- Can provide ongoing funding for services.
- Can be used for acquisition, improvement and maintenance.
- Can be put into place through agreement with developers of new development areas.
- The facilities and real property acquired and improved need not be located within the district.
- Tax formula need not be based on benefit (but can be).

Cons

- Requires approval of landowners of two-third voting electorate in inhabited areas or of the landowners in uninhabited areas.
- Some County residents are already subject to Mello-Roos fees and may be reluctant to add another such tax.

Annual Funding Example

A Mello-Roos Special Tax could be introduced to cover the development and management of regional parks. The Special Tax could be formulated in a number of ways. If applied to residential units only, a \$15 per residential unit tax would be sufficient to generate an average of about \$2 million each year in the early years. Over time, as additional residential development occurs, annual revenues would increase. Annual inflators can be built into the tax to ensure that the real per unit charges do not erode over time.

Benefit Assessment District. Benefit Assessment Districts, which are subject to Proposition 218, must be based on a determination that the assessment for each parcel is proportional to the benefit received by that parcel. A Landscape and Lighting District is one type of Benefit Assessment District. Unlike most Benefit Assessment Districts, a Landscape and Lighting District can be used to pay for maintenance, operations, and servicing of park improvements.

Pros

- Covers a specific benefited area.
- Can provide ongoing funding for operations and maintenance as well as acquisition and development.
- Benefit-based assessments may be viewed as the fairest method of funding.
- Only requires a simple majority as opposed to a two-thirds majority for other tax-based funding measures.
- There are options for exempting agricultural lands from the assessment.

Cons

- Requires approval of the majority of the affected property owners whose votes are weighted according to the dollar value of their proposed assessments.
- Requires an annual engineer's report, agreement over special benefit by land use, and more elaborate accounting processes than special tax funding.
- Subject to Proposition 218 majority protest and election requirements, including annual majority protest hearings.

Annual Funding Example

Overall level of funding could be similar to that under a Mello-Roos Special Tax, though the charges to different property owners will vary based on benefit received. Detailed study required to establish potential charge structure.

General Obligation Bonds/Property Tax Overrides. The County could issue a GO Bond for the acquisition, development and rehabilitation of regional parks. The bond could finance capital improvements while the bond principal and interest would be paid back over time, generally by an increase in taxes. The passage of such a bond would require a two-thirds majority vote of county residents.

Pros

- Can be issued by a city, county or special district.
- Can be placed on ballot by legislative body or by initiative.
- Provides significant "up front" funding.
- Increased tax eventually "sunsets" which may be palatable to voters.

Cons

- Requires approval of two-thirds of voters if new taxes are involved.
- Cannot be used for operations and maintenance.
- Not a permanent source of revenue; provides one large lump of funding.
- Subject to market conditions and agency debt/credit rating.
- High cost of bond issue preparation and administration.

Annual Funding Example

The issuance of a GO Bond permits the establishment of an ad valorem property tax override. GO Bonds can be funded using several sources of funds. A property tax override of about 0.03 percent would be sufficient to generate about \$5 million each year in debt service payments on a GO Bond. For the median priced new home in Solano County this represents about \$50 per unit per year in the early years. Payments would likely fall over time as new assessed value is added. Older homes with assessed values below median market rate would pay less, and commercial properties would also pay.

DEVELOPMENT-BASED FUNDING AND PROGRAMS

Development-based funding includes funds derived from mitigation fees/dedications.

Park and Open Space Dedications and Fees. The Quimby Act allows a city or county to require payments and/or dedication of land for parks as a condition of subdivision approval. The payments or dedications cannot exceed the amounts specified in the Act, which are tied to the size of the development. Quimby exactions have been used by the cities of Benicia, Vallejo, and Fairfield to secure park and open space land and improvements in conjunction with major residential developments.

However, due to Solano Count's Orderly Growth Initiative, urban development is directed to existing urban areas. Therefore, when a major residential development occurs, the land is annexed into a city and the development fees collected would be directed back to each city's park program rather than being directed at building a countywide regional park system.

Pros

- Can provide a substantial amount of park land and funding for improvements depending on the scale of development (does not apply to subdivisions with five units or less).
- In Solano County this is one way to expand park land within and adjacent to the cities.

Cons

- Significant park land and improvements can only be secured in conjunction with significant development; no money would be raised in the absence of development.
- Doesn't provide ongoing funding for maintenance and management.

GRANTS

Potential sources of grants include federal sources, state sources, regional sources, and private foundations. Most grants require local matching funds, and all grant programs require demonstration of strategic thinking and planning in the proposed use of funds. Grants can be used to fund regional parks planning, acquisition and development. Grant funding is rarely available to fund ongoing operations and maintenance costs.

Pros

- Excellent source of capital outlay funding.

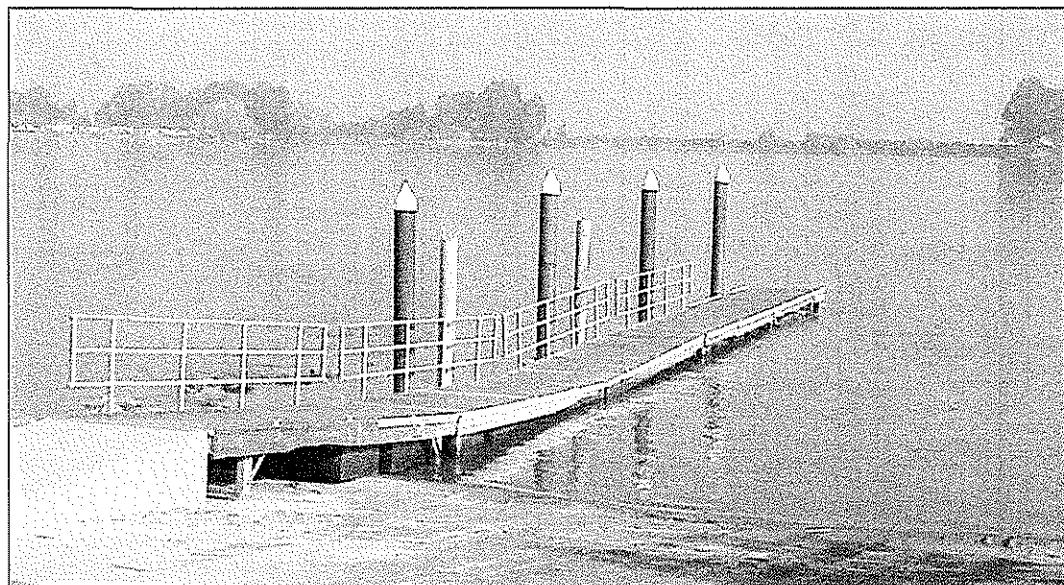
Cons

- One-time funds only.
- Cannot generally be used for operations and maintenance.
- Often need to be matched with local funding.

APPENDIX G: CAPITAL IMPROVEMENT PROGRAM

The Solano County Board of Supervisors has approved a five year Capital Improvement Program developed by its Park Division. The Plan covers improvement projects at Sandy Beach, Lake Solano, and Belden's Landing county parks. It serves as a management tool to help insure that the most urgent projects are identified and accomplished.

The Capital Improvement Program is reviewed regularly, and may be revised annually because of a change of conditions, funding, and priorities. Individual capital improvement projects are described on the following pages.



Sandy Beach Regional Park

Capital Improvement Projects
(In thousands of dollars)

Project Name: Visitor's Center & Campground Entry Redesign

Project No.: 7000021102

Project Location: Lake Solano Park, Winters

Project Category: New Land, Buildings & Facilities (Buy or Build)

Sub Category: Recreation

Project Delivery: Design - Bid - Build

Start Date: 7/1/2002

End Date: 6/30/2004

Department: Parks & Recreation

Dept. No.: 7000

Function: Recreation

Sub Function: Recreation

Division: NA



Description

The Visitor's Center & Campground Entry Redesign is a 5,890 SF project conceived by the Solano County Parks and Recreation Department in conjunction with the Federal Bureau of Reclamation and neighboring Yolo County. It will be the focus of a nature preserve, trail from "dam to dam" along approximately six miles of Putah Creek. The following functions will be included in the project: redesign of the entry road to better facilitate separation of through traffic, visitor parking and RV check-in, sale of camping sundries, maps and memorabilia, interpretive displays of local plants and animals, large aquariums for display of local fish, an AV classroom for general and special nature presentations, offices for representatives of Federal and State Agencies cooperating in the Putah Creek Discovery Corridor Project, a work room for creating and editing interpretive displays, park staff toilets and lockers, public toilets, and vending machines for snacks, soft drinks and fire wood.

Estimated Project Costs - in Thousands

Site Site:	\$0
Preliminary:	\$85
Project Control:	\$113
A & E:	\$165
Permits & Fees:	\$98
Construction:	\$971
FF&E/Move:	\$0
Contingency:	\$146
Total Cost	\$1,578

Net Impact on Operating Budget

This project will result in simplified operational procedures, however, it is a 5,890 SF new facility that will incur regular operating and maintenance costs. It is anticipated that operating and maintenance costs will be offset by increased visitor revenue.

Capital Funding and Spending Plan

Source of Funds	Name of Fund	Fund Amount	Expiration Date	Prior Year(s) Expense	Year 1 03-04			Projected Requirements				Five Year Total	Project Total
					Current Expense	New Funding	Carry Forward	Year 2 04-05	Year 3 05-06	Year 4 06-07	Year 5 07-08		
State Funds	Prop 40 30% match req.	552	0	0	0	0	552	0	552	0	0	552	552
State Funds	Prop 12 30% match req.	552	60	492	0	0	0	0	0	0	0	492	552
Unfunded	30% match for Prop 40	237	0	0	0	0	237	0	237	0	0	237	237
Unfunded	30% match for Prop 12	237	0	237	0	0	0	0	0	0	0	237	237
Totals		1,578	60		729	0	789	0	789	0	0	1,518	1,578
	Gross Operating & Maintenance Costs for :				0			0	0	26	26	52	

New Land, Buildings & Facilities (Buy or Build) - Fully Funded

Capital Improvement Projects (In thousands of dollars)	
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Project Name: Automatic Cashier Pay Stations **Project No.:** 1117021002M
Project Location: Lake Solano Park and Sandy Beach Park
Project Category: Major Improvements to Existg. Facilities **Sub Category:** Site Work
Project Delivery: Bid - Build
Start Date: 7/1/2005 **End Date:** 6/30/2006
Department: Parks & Recreation **Dept. No.:** 7000
Function: Recreation **Sub Function:** Recreation
Division: NA



Description

Purchase and install automatic cashier pay stations at Lake Solano and Sandy Beach. Each requires a concrete pad plus telephone and electrical service.

This project remedies current problems with park fees collections, change making, book keeping and cash handling.

The per capita program of Californian Prop. 40 will be utilized to fund this project.

Net Impact on Operating Budget

Should increase collections and reduce staff time spent in collections and book keeping.

Estimated Project Costs - in Thousands

Site Site:	\$0
Preliminary:	\$10
Project Control:	\$15
A & E:	\$0
Permits & Fees:	\$0
Construction:	\$60
FF&E/Move:	\$0
Contingency:	\$17
Total Cost	\$102

Capital Funding and Spending Plan

Source of Funds	Name of Fund	Fund Amount	Expiration Date	Prior Year(s) Expense	Year 1 03-04			Projected Requirements				Five Year Total	Project Total
					Current Expense	New Funding	Carry Forward	Year 2 04-05	Year 3 05-06	Year 4 06-07	Year 5 07-08		
State Funds	Prop 40 per capita	102	0	0	0	0	102	0	102	0	0	102	102
Totals		102	0	0	0	0	102	0	102	0	0	102	102
Gross Operating & Maintenance Costs for :					0	0	0	0	0	0	0	0	0

Major Improvements to Existg. Facilities - Fully Funded

Capital Improvement Projects (In thousands of dollars)	
Project Name: Build Cabins for Rent and Increase Utility Services	Project No.: 1117021002K
Project Location: Lake Solano Park, Winters	
Project Category: Major Improvements to Existg. Facilities	Sub Category: Additions
Project Delivery: Design - Bid - Build	
Start Date: 7/1/2004	End Date: 6/30/2005
Department: Parks & Recreation	Dept. No.: 7000
Function: Recreation	Sub Function: Recreation
Division: NA	



Description

Purchase and install eight prefabricated log cabins. Provide electricity and water to each cabin. Provide electricity and water to 16 additional campsites per previous plan.

This project will result in increased revenue for the campground.

The per capita program of Californian Prop. 40 will be utilized to fund this project.

Net Impact on Operating Budget

Building eight new camp ground cabins for rent will increase operating and maintenance costs.

Estimated Project Costs - in Thousands

Site Site:	\$0
Preliminary:	\$35
Project Control:	\$45
A & E:	\$25
Permits & Fees:	\$33
Construction:	\$250
FF&E/Move:	\$0
Contingency:	\$57
Total Cost	\$445

Capital Funding and Spending Plan

Source of Funds	Name of Fund	Fund Amount	Expiration Date	Prior Year(s) Expense	Year 1 03-04			Projected Requirements				Five Year Total	Project Total
					Current Expense	New Funding	Carry Forward	Year 2 04-05	Year 3 05-06	Year 4 06-07	Year 5 07-08		
State Funds	Prop 40 per capita	445	0	0	0	0	445	445	0	0	0	445	445
Totals		445	0	0	0	0	445	445	0	0	0	445	445
	Gross Operating & Maintenance Costs for :				0			0	34	34	34	103	

Major Improvements to Existg. Facilities - Fully Funded

Capital Improvement Projects (In thousands of dollars)	
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Project Name: Docks, Trails, Beaches, Wetlands, Utilities

Project No.: 7000021102A



Project Location: Lake Solano Park, Winters

Project Category: Major Improvements to Existg. Facilities

Sub Category: Site Work

Project Delivery: Design - Bid - Build

Start Date: 7/1/2005

End Date: 6/30/2006

Department: Parks & Recreation

Dept. No.: 7000

Function: Recreation

Sub Function: Recreation

Division:

Description

1. Replace existing boat rental docks
 2. Construct 6 ft. wide accessible trail between the youth area and the picnic area. Install one 60 ft. suspension bridge and one 15ft. Bridge, both ADA accessible. Grade gravel and asphalt the trail. This price may be reduced if we use county jail inmates to clear the trail first. If we have a suspended walkway over the tule marsh, as suggested by the Bureau of Reclamation the price will surely double.
 3. Create two buoyed off public wading beach areas adjacent to picnic areas and construct an ADA accessible fishing pier. The beach areas would replace the existing swimming pond that requires ongoing and extensive water testing and anti contamination measures. The shore line would be graded in two areas, and a combination of fabric and sand would be placed below water level.
 4. Convert the existing swimming pond into a native wetlands area. Remove the under ground liner and most of the existing sand and plant wetland vegetation.
 5. Expand utility service to camp sites not yet provided with service under prop 12.
- The per capita program of California Prop. 40 will be utilized to fund this project.

Net Impact on Operating Budget

Unknown

Estimated Project Costs - in Thousands

Site Site:	\$0
Preliminary:	\$60
Project Control:	\$45
A & E:	\$56
Permits & Fees:	\$0
Construction:	\$640
FF&E/Move:	\$0
Contingency:	\$160
Total Cost	\$961

Capital Funding and Spending Plan

Source of Funds	Name of Fund	Fund Amount	Expiration Date	Prior Year(s) Expense	Year 1 03-04			Projected Requirements				Five Year Total	Project Total
					Current Expense	New Funding	Carry Forward	Year 2 04-05	Year 3 05-06	Year 4 06-07	Year 5 07-08		
State Funds	Prop 40 per capita	961	0	0	0	0	961	161	800	0	0	961	961
Totals		961	0	0	0	0	961	161	800	0	0	961	961
Gross Operating & Maintenance Costs for :					0	0	0	0	0	60	60	120	

Major Improvements to Existg. Facilities - Fully Funded

Capital Improvement Projects (in thousands of dollars)																											
<p>Project Name: Miscellaneous Projects, Well, Tables, Signs</p> <p>Project Location: Belden's Landing Park, Suisun</p> <p>Project Category: Major Improvements to Existg. Facilities</p> <p>Project Delivery: Bid - Build</p> <p>Start Date: 7/1/2002</p> <p>Department: Parks & Recreation</p> <p>Function: Recreation</p> <p>Division: NA</p>					<p>Project No.: 1117021007</p> <p>Sub Category: Site Work</p> <p>End Date: 6/30/2003</p> <p>Dept. No.: 7000</p> <p>Sub Function: Recreation</p>																						
<p>Description</p> <p>1. New water well and irrigation system 2. New tables, benches and trash containers 3. New interpretive signs and display cases</p> <p>The per capita program of California Prop. 12 will be utilized to fund this project.</p>																											
<p>Estimated Project Costs - in Thousands</p> <table border="1"> <tbody> <tr> <td>Site Site:</td> <td>\$0</td> </tr> <tr> <td>Preliminary:</td> <td>\$15</td> </tr> <tr> <td>Project Control:</td> <td>\$0</td> </tr> <tr> <td>A & E:</td> <td>\$0</td> </tr> <tr> <td>Permits & Fees:</td> <td>\$0</td> </tr> <tr> <td>Construction:</td> <td>\$53</td> </tr> <tr> <td>FF&E/Move:</td> <td>\$0</td> </tr> <tr> <td>Contingency:</td> <td>\$7</td> </tr> <tr> <td>Total Cost</td> <td>\$75</td> </tr> </tbody> </table>										Site Site:	\$0	Preliminary:	\$15	Project Control:	\$0	A & E:	\$0	Permits & Fees:	\$0	Construction:	\$53	FF&E/Move:	\$0	Contingency:	\$7	Total Cost	\$75
Site Site:	\$0																										
Preliminary:	\$15																										
Project Control:	\$0																										
A & E:	\$0																										
Permits & Fees:	\$0																										
Construction:	\$53																										
FF&E/Move:	\$0																										
Contingency:	\$7																										
Total Cost	\$75																										
<p>Net Impact on Operating Budget</p> <p>This project will result in reduced operating and maintenance costs</p>																											



Capital Funding and Spending Plan

Source of Funds	Name of Fund	Fund Amount	Expiration Date	Prior Year(s) Expense	Year 1 03-04			Projected Requirements				Five Year Total	Project Total
					Current Expense	New Funding	Carry Forward	Year 2 04-05	Year 3 05-06	Year 4 06-07	Year 5 07-08		
State Funds	Prop 12 per capita	75	75	0	0	0	0	0	0	0	0	0	75
Totals		75	75	0	0	0	0	0	0	0	0	0	75
Gross Operating & Maintenance Costs for :					0			0	0	0	0	0	0

Major Improvements to Existg. Facilities - Fully Funded

Capital Improvement Projects (In thousands of dollars)	
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Project Name: Miscellaneous Repairs, Replacements and Improvements **Project No.:** 1117021002J

Project Location: Sandy Beach Park, Rio Vista

Project Category: Major Improvements to Existg. Facilities

Sub Category: Site Work

Project Delivery: Bid - Build

Start Date: 7/1/2003

End Date: 6/30/2004

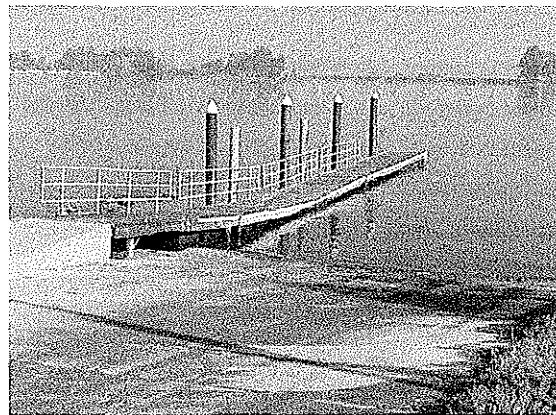
Department: Parks & Recreation

Dept. No.: 7000

Function: Recreation

Sub Function: Recreation

Division: NA



Description

Informational signs, boat ramp-dock repair and irrigation sprinklers at Sandy Beach.

This project remedies problems resulting from deferred maintenance, general age related degradation of park infrastructures, and non-compliance with requirements of California Title 24 / Federal Americans with Disabilities Act.

The per capita program of California Prop. 40 will be used to fund this project.

Net Impact on Operating Budget

This project will result in a minor reduction in operating and maintenance costs.

Estimated Project Costs - in Thousands

Site Site:	\$0
Preliminary:	\$15
Project Control:	\$0
A & E:	\$0
Permits & Fees:	\$0
Construction:	\$41
FF&E/Move:	\$0
Contingency:	\$4
Total Cost	\$60

Capital Funding and Spending Plan

Source of Funds	Name of Fund	Fund Amount	Expiration Date	Prior Year(s) Expense	Year 1 03-04			Projected Requirements				Five Year Total	Project Total
					Current Expense	New Funding	Carry Forward	Year 2 04-05	Year 3 05-06	Year 4 06-07	Year 5 07-08		
State Funds	Prop 40 per capita	60	0	0	60	0	0	0	0	0	0	60	60
Totals		60	0	0	60	0	0	0	0	0	0	60	60
Gross Operating & Maintenance Costs for :					0			0	0	0	0	0	

Major Improvements to Existg. Facilities - Fully Funded

Capital Improvement Projects
(In thousands of dollars)

Project Name: New Shower Building

Project No.: 1117021002A

Project Location: Sandy Beach Park, Rio Vista

Project Category: Major Improvements to Existg. Facilities

Sub Category: Additions

Project Delivery: Design - Build

Start Date: 1/1/2003

End Date: 6/30/2002

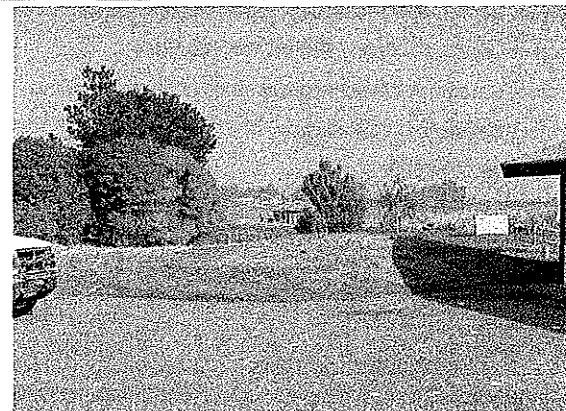
Department: Parks & Recreation

Dept. No.: 7000

Function: Recreation

Sub Function: Recreation

Division: NA



Description

Build a new ADA compliant structure with four shower stalls, two sinks, skylights, and interior lighting

The per capita program of California Prop. 12 will be used to fund this project.

Estimated Project Costs - in Thousands

Site Site:	\$0
Preliminary:	\$30
Project Control:	\$30
A & E:	\$10
Permits & Fees:	\$0
Construction:	\$65
FF&E/Move:	\$0
Contingency:	\$27
Total Cost	\$162

Net Impact on Operating Budget

This project will result in increased operating and maintenance costs.

Capital Funding and Spending Plan

Source of Funds	Name of Fund	Fund Amount	Expiration Date	Prior Year(s) Expense	Year 1 03-04			Projected Requirements				Five Year Total	Project Total
					Current Expense	New Funding	Carry Forward	Year 2 04-05	Year 3 05-06	Year 4 06-07	Year 5 07-08		
State Funds	Prop 12 per capita	162	162	0	0	0	0	0	0	0	0	0	0
Totals		162	162	0	0	0	0	0	0	0	0	0	0
Gross Operating & Maintenance Costs for :					0			0	0	0	0	0	0

Capital Improvement Projects (In thousands of dollars)													
Project Name: Park Ranger's Residence Replacements			Project No.: 1117021002D										
Project Location: Lake Solano and Sandy Beach Parks			Sub Category: Replacements										
Project Category: Major Improvements to Existg. Facilities													
Project Delivery: Bid - Build													
Start Date: 7/1/2003			End Date: 6/30/2004										
Department: Parks & Recreation			Dept. No.: 7000										
Function: Recreation			Sub Function: Recreation										
Division: NA													
Description													
Replace two existing three bedroom two bathroom mobile homes, include appliances, and rebuild carports, decks and stairs.													
This project remedies problems resulting from deferred maintenance, general age related degradation of park infrastructures, and non-compliance with requirements of California Title 24 / Federal Americans with Disabilities Act.													
The per capita program of California Prop. 40 will be used to fund this project.													
Net Impact on Operating Budget													
This project should have little impact on operating and maintenance costs.													
Estimated Project Costs - in Thousands													
Site Site:											\$0		
Preliminary:											\$30		
Project Control:											\$30		
A & E:											\$0		
Permits & Fees:											\$0		
Construction:											\$180		
FF&E/Move:											\$0		
Contingency:											\$48		
Total Cost											\$288		
Capital Funding and Spending Plan													
Source of Funds	Name of Fund	Fund Amount	Expiration Date	Prior Year(s) Expense	Year 1 03-04			Projected Requirements				Five Year Total	Project Total
					Current Expense	New Funding	Carry Forward	Year 2 04-05	Year 3 05-06	Year 4 06-07	Year 5 07-08		
State Funds	Prop 40 per capita	288	0	288	0	0	0	0	0	0	288	288	
Totals		288	0	288	0	0	0	0	0	0	288	288	
	Gross Operating & Maintenance Costs for :			0		0	0	0	0	0	0	0	

Major Improvements to Existg. Facilities - Fully Funded

Capital Improvement Projects (In thousands of dollars)									
Project Name: Play Grounds and Play Systems					Project No.: 11170210021				
Project Location: Lake Solano and Sandy Beach Parks									
Project Category: Major Improvements to Existg. Facilities					Sub Category: Additions				
Project Delivery: Bid - Build									
Start Date: 7/1/2003					End Date: 6/30/2004				
Department: Parks & Recreation					Dept. No.: 7000				
Function: Recreation					Sub Function: Recreation				
Division: NA									
Description									
Lake Solano, two small play systems, one for children 2-5 in the picnic area and one for children 5-12 in the campground area.									
Sandy Beach, two play areas with play systems, one for children 2-5 and the other for children 5-12 bathe accessible with paths from accessible pedestrian walks.									
This project remedies problems resulting from deferred maintenance, general age related degradation of park infrastructures, and non-compliance with requirements of California Title 24 / Federal Americans with Disabilities Act.									
The per capita program of California Prop. 40 will be used to fund this project.									
Estimated Project Costs - in Thousands									
Site Site: \$0									
Preliminary: \$15									
Project Control: \$15									
A & E: \$0									
Permits & Fees: \$0									
Construction: \$122									
FF&E/Move: \$0									
Contingency: \$30									
Total Cost \$182									



Capital Funding and Spending Plan

Source of Funds	Name of Fund	Fund Amount	Expiration Date	Prior Year(s) Expense	Year 1 03-04			Projected Requirements				Five Year Total	Project Total
					Current Expense	New Funding	Carry Forward	Year 2 04-05	Year 3 05-06	Year 4 06-07	Year 5 07-08		
State Funds	Prop 40 per capita	182	0	182	0	0	0	0	0	0	0	182	182
Totals		182	0	182	0	0	0	0	0	0	0	182	182
Gross Operating & Maintenance Costs for :					0			0 0 0 0				0	

Major Improvements to Existg. Facilities - Fully Funded

Capital Improvement Projects (In thousands of dollars)	
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Project Name: Replace Tables & Grills and Build New Group Pads

Project No.: 1117021002H

Project Location: Lake Solano and Sandy Beach Parks

Project Category: Major Improvements to Existg. Facilities

Project Delivery: Bid - Build

Start Date: 7/1/2003

End Date: 6/30/2004

Department: Parks & Recreation

Dept. No.: 7000

Function: Recreation

Sub Function: Recreation

Division: NA



Description

This project will renew and add to existing group picnic areas in both Lake Solano and Sandy Beach Parks, and it will result in increased campground revenues.

The per capita program of California Prop. 40 will be used to fund this project.

Estimated Project Costs - in Thousands

Site Site:	\$0
Preliminary:	\$5
Project Control:	\$15
A & E:	\$0
Permits & Fees:	\$0
Construction:	\$79
FF&E/Move:	\$0
Contingency:	\$20
Total Cost	\$119

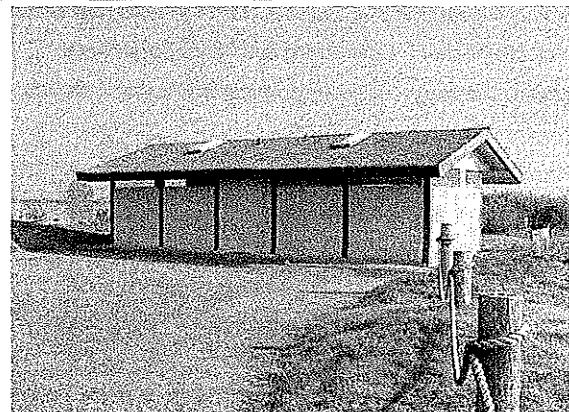
Net Impact on Operating Budget

This project should have little impact on operation and maintenance cost.

Capital Funding and Spending Plan

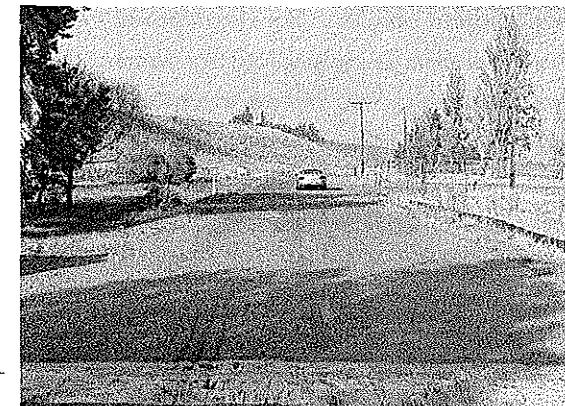
Source of Funds	Name of Fund	Fund Amount	Expiration Date	Prior Year(s) Expense	Year 1 03-04			Projected Requirements				Five Year Total	Project Total
					Current Expense	New Funding	Carry Forward	Year 2 04-05	Year 3 05-06	Year 4 06-07	Year 5 07-08		
State Funds	Prop 40 per capita	119	0	119	0	0	0	0	0	0	0	119	119
Totals		119	0	119	0	0	0	0	0	0	0	119	119
	Gross Operating & Maintenance Costs for :				0			0	0	0	0	0	0

Capital Improvement Projects (In thousands of dollars)																	
Project Name: Restroom Rehabilitation & ADA Compliance				Project No.: 1117021002													
Project Location: Lake Solano and Sandy Beach Parks				Sub Category: ADA/Title 24 Disabled Access													
Project Category: Major Improvements to Existg. Facilities																	
Project Delivery: Design - Build				End Date: 6/30/2003													
Start Date: 7/1/2002				Dept. No.: 7000													
Department: Parks & Recreation				Sub Function: Recreation													
Function: Recreation																	
Division: NA																	
Description																	
Lake Solano, replace worn toilet partitions, piping and plumbing fixtures in eight restrooms, paint interior and exterior walls, re-roof with composition shingles.																	
Sandy Beach, redesign and reconfigure three restrooms for ADA compliance. Replace existing plumbing, piping and fixtures including drinking fountains and hot water heaters. Replace existing partitions and lighting. Repaint.																	
The per capita program of California Prop. 12 will be utilized to fund this project.																	
Net Impact on Operating Budget																	
This project will result in reduced operating and maintenance costs.																	
Estimated Project Costs - in Thousands																	
Site Site: \$0																	
Preliminary: \$45																	
Project Control: \$30																	
A & E: \$28																	
Permits & Fees: \$0																	
Construction: \$428																	
FF&E/Move: \$0																	
Contingency: \$106																	
Total Cost \$637																	
Capital Funding and Spending Plan																	
Source of Funds	Name of Fund	Fund Amount	Expiration Date	Prior Year(s) Expense	Year 1 03-04			Projected Requirements									
					Current Expense	New Funding	Carry Forward	Year 2 04-05	Year 3 05-06	Year 4 06-07	Year 5 07-08	Five Year Total	Project Total				
State Funds	Prop 12 per capita	637	637	0	0	0	0	0	0	0	0	0	637				
Totals		637	637	0	0	0	0	0	0	0	0	0	637				
Gross Operating & Maintenance Costs for :				0			0			0							



Major Improvements to Existg. Facilities - Fully Funded

Capital Improvement Projects (In thousands of dollars)									
Project Name: Road and Parking Area Repair					Project No.: 1117021002B				
Project Location: Lake Solano and Sandy Beach Parks									
Project Category: Major Improvements to Existg. Facilities					Sub Category: Site Work				
Project Delivery: Bid - Build									
Start Date: 7/1/2003					End Date: 6/30/2004				
Department: Parks & Recreation					Dept. No.: 7000				
Function: Recreation					Sub Function: Recreation				
Division: NA									
Description									
Lake Solano, repair erosion at parking lot drainage inlets, repair pot holes, seal cracks, replace damaged concrete curbs, overlay existing pavement and stripe. Repair a landslide adjacent to the upper parking lot.									
Sandy Beach, repave and stripe park entrance roadway, approximately one half mile, from Beach Dr. to the park toll building.									
This project remedies problems resulting from deferred maintenance, general age related degradation of park infrastructures, and non-compliance with requirements of California Title 24 / Federal Americans with Disabilities Act.									
The per capita program of California Prop. 12 will be utilized to fund this project.									
Estimated Project Costs - in Thousands									
Site Site: \$0									
Preliminary: \$0									
Project Control: \$15									
A & E: \$0									
Permits & Fees: \$0									
Construction: \$472									
FF&E/Move: \$0									
Contingency: \$46									
Total Cost \$533									
Net Impact on Operating Budget									
This project will result in little impact on operating and maintenance costs.									



Capital Funding and Spending Plan

Source of Funds	Name of Fund	Fund Amount	Expiration Date	Prior Year(s) Expense	Year 1 03-04			Projected Requirements				Five Year Total	Project Total
					Current Expense	New Funding	Carry Forward	Year 2 04-05	Year 3 05-06	Year 4 06-07	Year 5 07-08		
State Funds	Prop 12 per capita	533	533	0	0	0	0	0	0	0	0	0	533
Totals		533	533	0	0	0	0	0	0	0	0	0	533
Gross Operating & Maintenance Costs for :					0			0	0	0	0	0	0

Major Improvements to Existg. Facilities - Fully Funded

Capital Improvement Projects (In thousands of dollars)																		
Project Name: Sewer Repairs and Improvements			Project No.: 1117021002E															
Project Location: Sandy Beach and Lake Solano																		
Project Category: Major Improvements to Existg. Facilities			Sub Category: Site Work															
Project Delivery: Design - Build																		
Start Date: 7/1/2003			End Date: 6/30/2004															
Department: Parks & Recreation			Dept. No.: 7000															
Function: Recreation			Sub Function: Recreation															
Division: NA																		
Description																		
Lake Solano, install new septic tank/leach field and connect the new system to the existing camper waste dump holding tank. Install four new leach lines to the existing day use area leach field.																		
Sandy Beach, replace/repair existing sewer pumps and replace guide rails for lowering the pumps into their respective deep sumps.																		
This project remedies problems resulting from deferred maintenance, general age related degradation of park infrastructures, and non-compliance with requirements of California Title 24 / Federal Americans with Disabilities Act.																		
Per capita programs of Californian Prop. 12 and Prop. 40 will be utilized to fund this project. If needed, Roberti-Z'Berg-Harris programs of these Propositions will also be applied, provided 30 % non state matching funds are included.																		
Net Impact on Operating Budget																		
This project will result in reduced operating and maintenance costs.																		
Estimated Project Costs - in Thousands																		
Site Site: \$0																		
Preliminary: \$30																		
Project Control: \$0																		
A & E: \$0																		
Permits & Fees: \$0																		
Construction: \$80																		
FF&E/Move: \$0																		
Contingency: \$11																		
Total Cost \$121																		
Capital Funding and Spending Plan																		
Source of Funds	Name of Fund	Fund Amount	Expiration Date	Prior Year(s) Expense	Year 1 03-04			Projected Requirements										
					Current Expense	New Funding	Carry Forward	Year 2 04-05	Year 3 05-06	Year 4 06-07	Year 5 07-08	Five Year Total	Project Total					
State Funds	Prop 40 per capita	121	0	0	121	0	0	0	0	0	0	121	121					
Totals		121	0	0	121	0	0	0	0	0	0	121	121					
	Gross Operating & Maintenance Costs for :				0			0	0	0	0	0	0					



APPENDIX H: REFERENCES

PLAN ADVISORY GROUP

<i>Name</i>	<i>Representing</i>
Darla Guenzler	Bay Area Open Space Council
Steve Rogers	Bureau of Reclamation
Tim Wakefield	Bureau of Reclamation
Ann Buehl	California Coastal Conservancy
Robert Floerke	California Department of Fish and Game
Warner Westrup	California Department of Parks and Recreation
Jim Sarro	California Wildlife Conservation Board
Mike Alvarez	City of Benicia
Jeff Matheson	City of Dixon
Fred Beiner	City of Fairfield
David Melilli	City of Rio Vista
Mick Jessup	City of Suisun City
Bob Farrington	City of Vacaville
Rollie Simons	City of Vacaville
Brian Dolan	City of Vallejo
Lori Clamurro	Delta Protection Commission
Hew Hesterman	Greater Vallejo Recreation District
Tom Kruse	Greater Vallejo Recreation District
Margaret Kralovec	Putah Creek Discovery Corridor
Kathy Gibson	Solano County Administrators Office
Jay Seslow	Solano County Agriculture Department
Harry Englebright	Solano County Environmental Management
Ted Armstrong	Solano County Parks
Richard Chandler	Solano County Parks
Duane Davis	Solano County Parks
Mike Martin	Solano County Parks
Richard Riddle	Solano County Parks
Tony Norris	Solano County Real Estate and Parks
Lt. John Badiano	Travis Air Force Base
Pam Muick	Solano Land Trust
Jim Ball	Solano Land Trust

PRINTED RESOURCE MATERIALS

Cities

- Benicia General Plan (June 1999)
- Benicia Park, Trails and Open Space Master Plan (July 1997)
- Dixon General Plan (1993)
- Dixon Parks & Recreation Plan (2000)
- Fairfield General Plan: Parks & Recreation Project (2002)
- Fairfield Master Trails Plan (December 1998)
- Fairfield Parks Capital Projects Plan (2002)
- Greater Vallejo Recreation District Master Plan (May 1986)
- Rio Vista General Plan (July 1999)
- Suisun City General Plan (May 1992)
- Vacaville General Plan (1990)
- Vacaville Parks, Recreation, Open Space and Master Plan (1992)
- Vallejo General Plan (July 1990)
- Vallejo Trails Master Plan (June 1988)

Solano County

- Resource Conservation Open Space Plan (February 1999)
- Countywide Trails Plan (April 2002)
- Land Use and Circulation Element of the General Plan (November 1980)

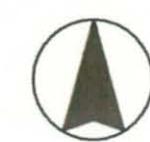
Other

- Tri-City and County (JPA) Cooperative Plan for Agriculture and Open Space Preservation (October 1994)
- Tri-City and County (JPA) Cooperative Plan for Agriculture and Open Space Implementation Plan (May 2001)
- California Outdoor Recreation Plan (DPR, 1993)
- Parks, Recreation, Open Space and Greenway Guidelines (NRPA, 1996)
- Napa County Open Space and Recreation Plan (1998)
- Yolo County Parks and Facilities Master Plan (2002)
- Recreation Projects Plan: Delta Protection Commission (2002)

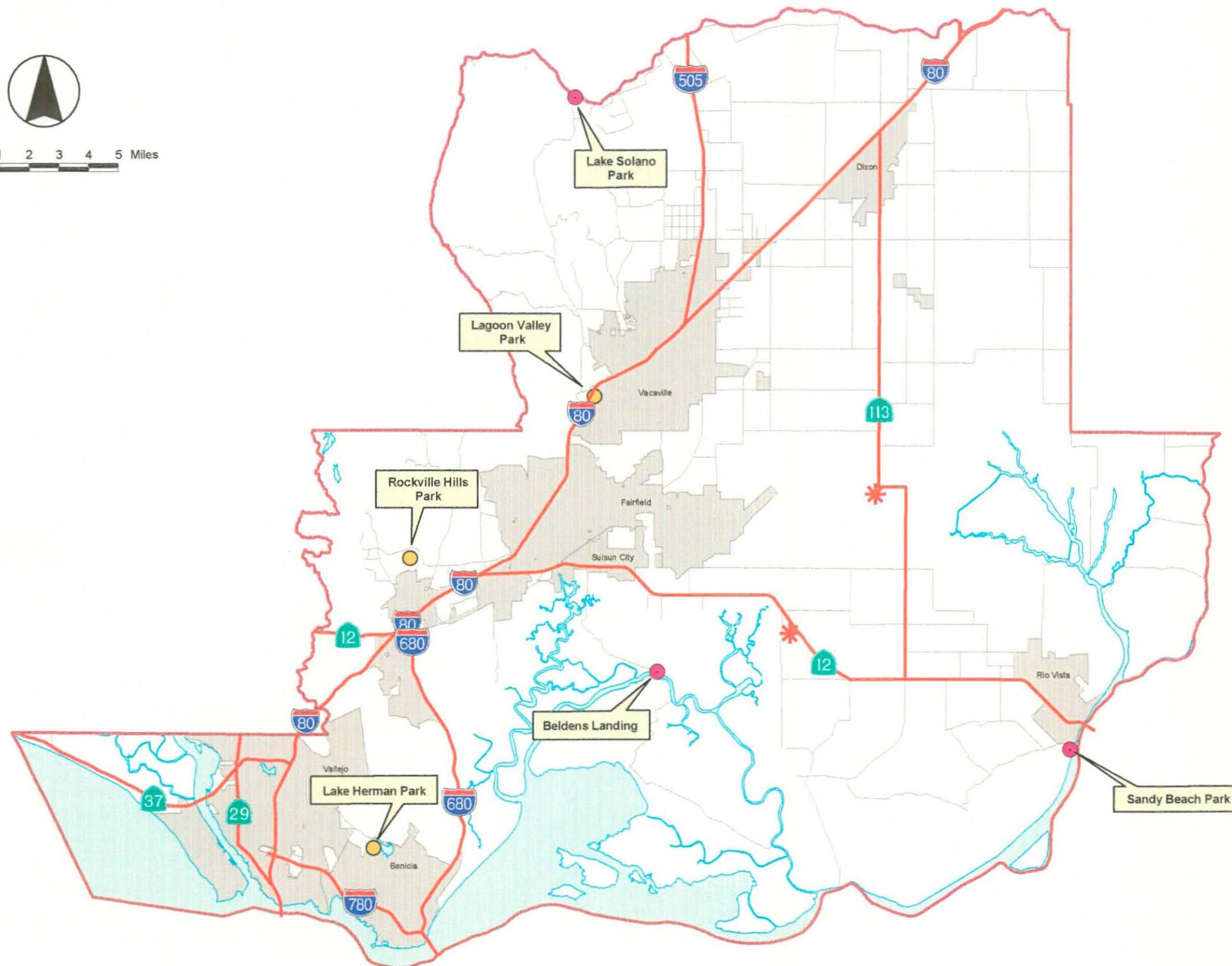
Solano County Regional Parks Map

Adopted by the Solano County
Board of Supervisors
June 24, 2003

- Existing Regional Parks
- Existing County operated
Regional Parks
- * Proposed new County
operated Regional Parks



0 1 2 3 4 5 Miles



The Park and Recreation Element of the Solano County General Plan was prepared by Jack Harrison of Harrison & Associates, park and open space consultants, in conjunction with Andal Enterprises, park planning consultants, and Agonia & Associates, environmental planning consultants.

CHAPTER
11

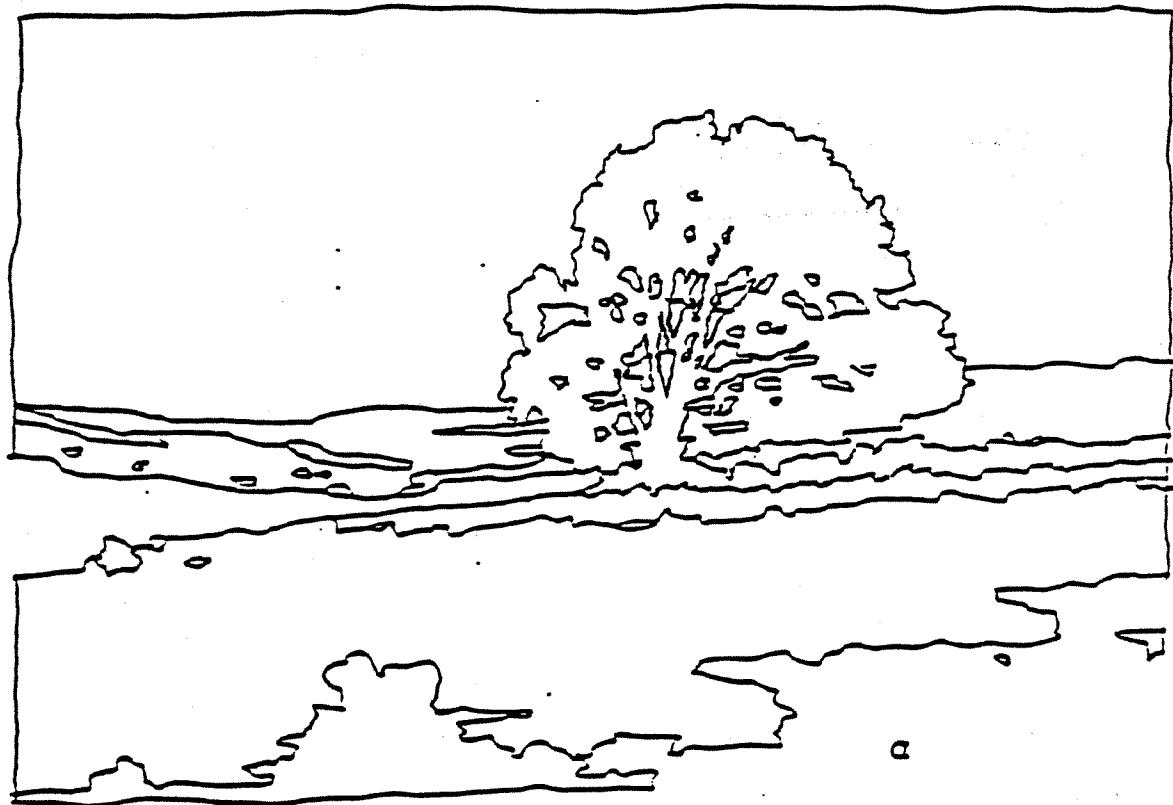
TRI-CITY AND COUNTY COOPERATIVE PLAN

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TRI-CITY AND COUNTY COOPERATIVE PLAN FOR AGRICULTURE AND OPEN SPACE PRESERVATION

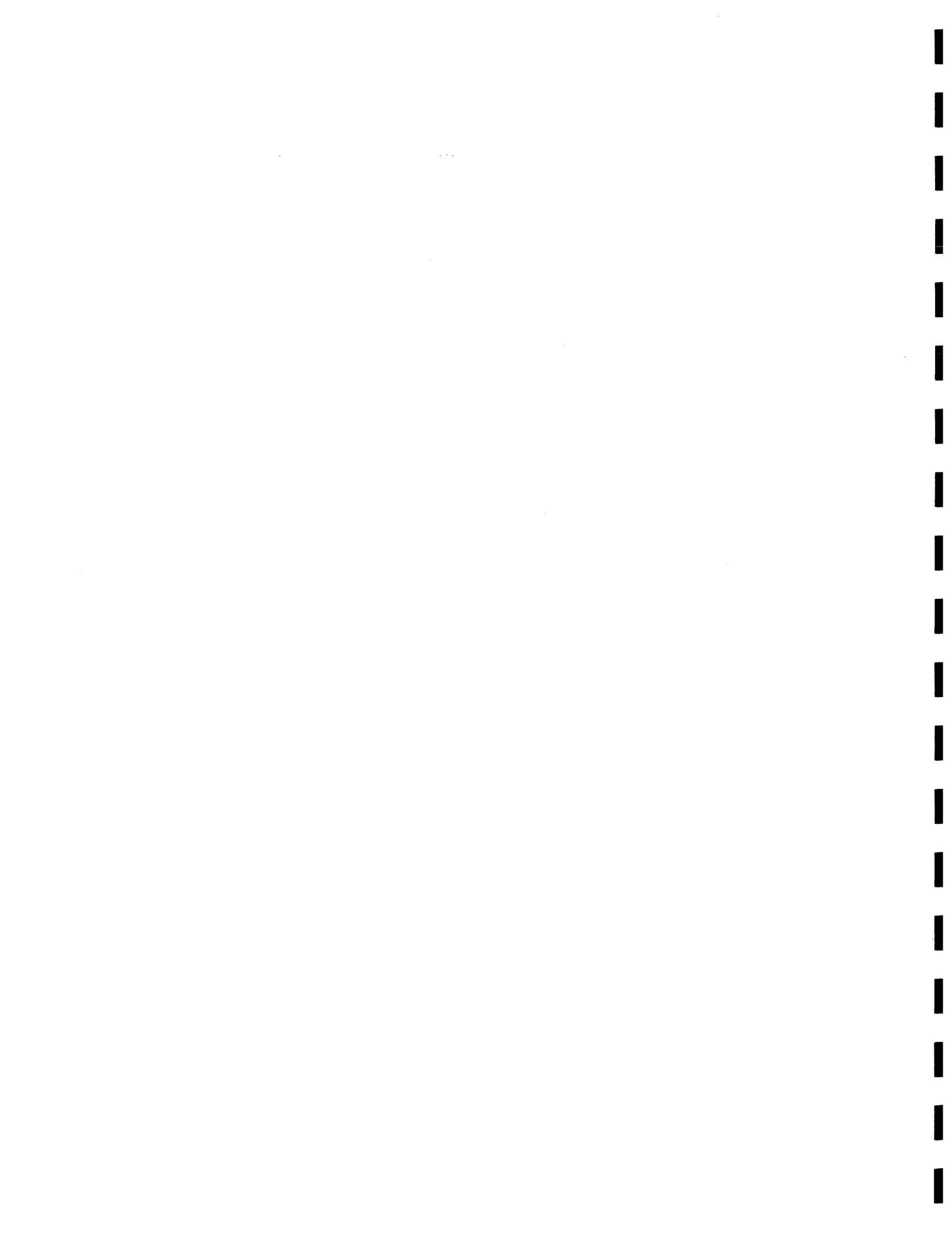
Concept Plan and Policy Program Report



**Approved by The Tri-City and County
Cooperative Planning Group
March 31, 1994
Amended October 20, 1994**

Prepared by:

The Planning Collaborative, Inc.



TRI-CITY AND COUNTY COOPERATIVE PLAN FOR AGRICULTURE AND OPEN SPACE PRESERVATION

Concept Plan and Policy Program Report

Prepared for:

**The Tri-City and County
Cooperative Planning Group,
consisting of the County of Solano,
City of Benicia,
City of Fairfield,
and City of Vallejo**

**Approved by The Tri-City and County
Cooperative Planning Group
March 31, 1994
Amended October 20, 1994**

**Approved by the Solano County Board of
Supervisors June 28, 1994
Amended January 3, 1995**

**Approved by the Vallejo City Council
June 21, 1994
Amended January 31, 1995**

**Approved by the Fairfield City Council
June 7, 1994
Amended January 17, 1995**

**Approved by the Benicia City Council
June 7, 1994
Amended December 6, 1994**

Prepared by The Planning Collaborative, Inc.



Acknowledgements

This Concept Plan and Policy Program Report was a collaborative effort by the following individuals who contributed their time, ideas and comments to the development of the document.

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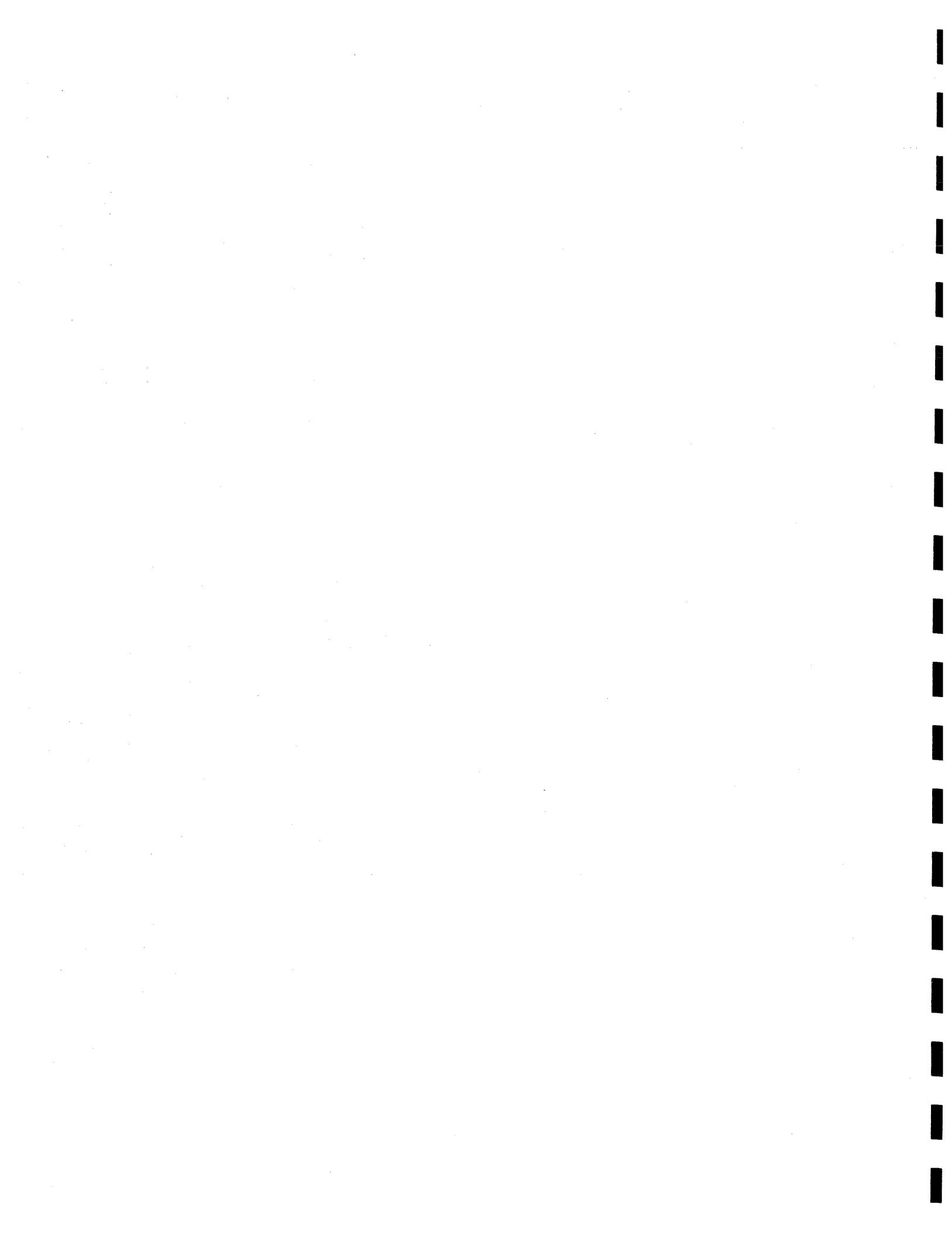
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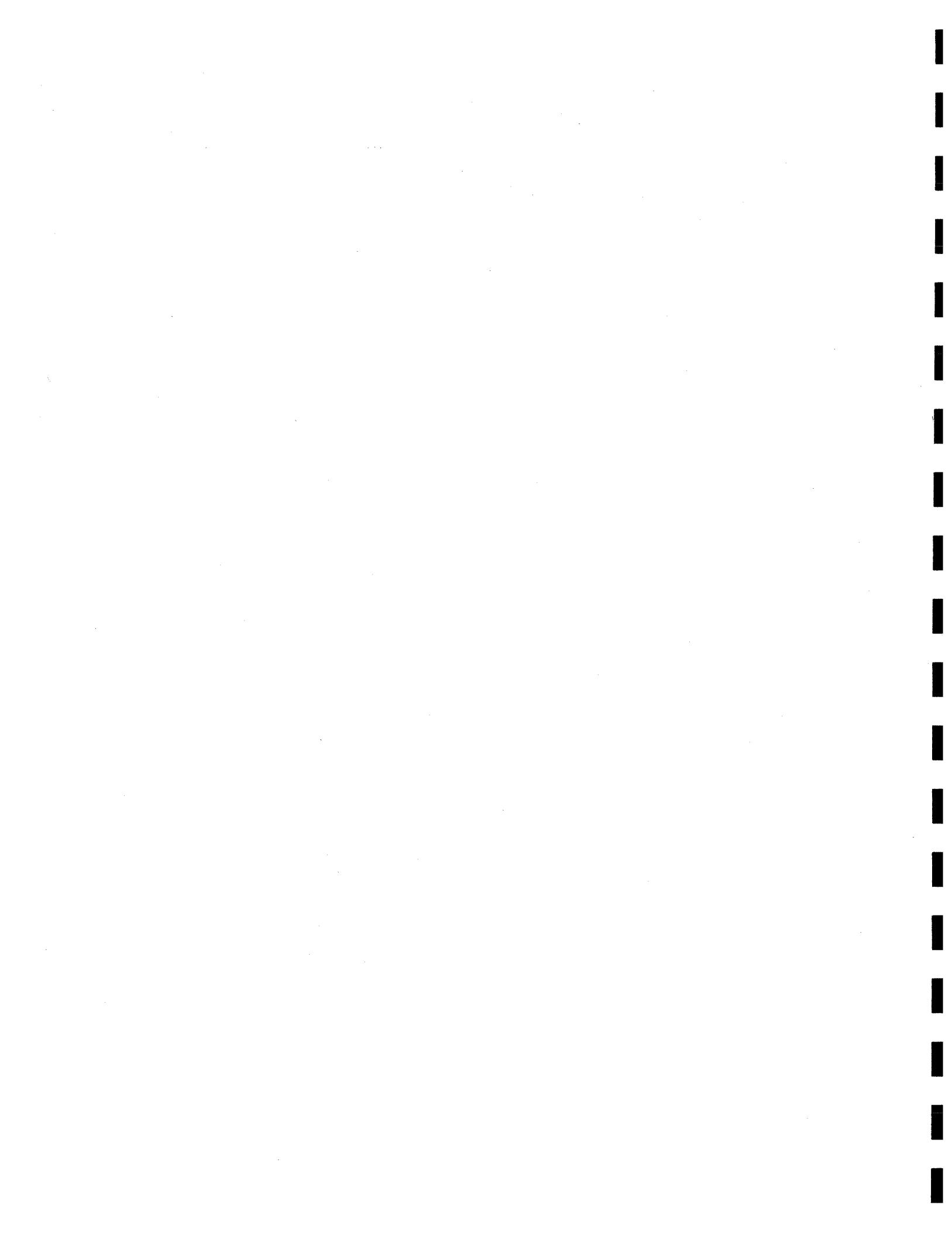


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Executive Summary

This Concept Plan and Policy Program ("Plan") establishes open space and agricultural resource protection policies as well as policies to guide planning for parklands and recreation facilities within the 10,000 acre Tri-City and County Cooperative Planning Area for Agriculture and Open Space ("Cooperative Planning Area") located in Solano County between the cities of Benicia, Fairfield and Vallejo. The Plan was developed by the Tri-City and County Cooperative Planning Citizens Advisory Committee which included interested members of the public appointed by each city and the County.

The Plan sets forth a number of objectives, policies, and guidelines intended to guide future land use and park planning within the Cooperative Planning Area by the Tri-City and County Cooperative Planning Group ("Group"), Solano County, and the cities of Benicia, Fairfield, and Vallejo. The Plan presents policies in three general categories:

The Open Space and Agricultural Resource Protection Policies in the Plan establish a clear objective of preserving and protecting open space resources in the Cooperative Planning Area and recognize the importance of promoting continued agricultural uses in the area to achieve that objective. These policies include measures to preclude urban development and protect the right to farm in the Cooperative Planning Area and to create incentives for land uses contributing to the permanent protection of open space in the Cooperative Planning Area. This part of the Plan also includes natural resource protection policies and policies acknowledging the need for further planning regarding potential wind energy and mineral resources in the Cooperative Planning Area.

The Regional Park and Recreation Policies recognize the potential for recreation activities such as family and group picnicking, camping, environmental education, swimming, fishing, and trap shooting at up to six sites in the Cooperative Planning Area. The Plan includes guidelines illustrating the types of uses that could be considered in further planning for each of the six potential recreation areas. The Plan also describes opportunities for hiking, cycling, and equestrian activities on a network of trails that could extend throughout the Cooperative Planning Area. The Plan sets forth policies for evaluating and developing recreation and trail facilities in a manner consistent with environmental constraints and the needs of adjoining landowners.

The Plan Implementation Policies describe the boundary of the Cooperative Planning Area and the procedures for adopting and implementing the Plan.

The policies call for a phased program of recreation area and trail corridor acquisition and development based on available funding, acquisition opportunities, public need, and other policy factors such as potential environmental constraints and liabilities. The Plan includes policies for park administration activities such as security, fence maintenance, vegetation control, and public education.

Following public hearings and environmental review, the Plan is to be considered for adoption by the Tri-City and County Cooperative Planning Group. The plan adopted by the Group will then be considered by each member of the Group (i.e., Solano County, Benicia, Fairfield, and Vallejo) for adoption as part of each member's General Plan. This will ensure a coordinated approach to planning within the Cooperative Planning Area and that consistent land use policies are applied throughout the area.

1.0 Introduction

1.1 PURPOSE AND SCOPE

Introduction

This Concept Plan and Policy Program Report represents the culmination of the third in a series of planning studies of the rural open space area that forms a physical and visual buffer between the Cities of Benicia, Fairfield and Vallejo ("the Cities"). In response to concerns of encroaching urban development into the hills, the associated loss of agricultural lands, and the diminishing physical separation between the communities, the **Vallejo-Benicia-Fairfield Open Space Planning Study**, Brady and Associates, (Phase I Study) was initiated by the Cities, Solano County, the Greater Vallejo Recreation District and the Solano County Farmlands and Open Space Foundation for a 24,000 acre study area. Completed in January of 1991, the Phase I Study identified opportunities for and constraints in establishing an open space system, recommended policies and developed criteria for open space preservation and development in the study area, and recommended techniques and mechanisms for preservation and maintenance of open space areas.

The **Draft Summary: Identifying the Tri-City and County Regional Park and Open Space Management Area**, 2M Associates (Phase II study), commissioned by the Cities, led to the designation of a 10,000 acre Regional Park and Open Space Management Area (now referred to as "Cooperative Planning Area") within the original 24,000 acre study area. The Cooperative Planning Area included areas suitable for public recreation, primary viewshed from the recreation areas, regional vista points, important ridgelines, and potential regional trail and open space corridors. In designating the Cooperative Planning Area, the Cities and Solano County also created the **Tri-City and County Regional Park and Open Space Group** (now referred to as the **Tri-City and County Cooperative Planning Group**) to plan for open space and recreational uses in the Cooperative Planning Area.

This report is the third phase of planning for the Cooperative Planning Area. It provides a **Concept Plan and Policy Program** for Regional Park and Open Space Preservation which includes policy guidelines for open space preservation mechanisms, park development, and recreation use.

Intent

The intent of this report is to provide clear direction for the Group, the Cities,

and the County to follow in ensuring that the scenic hills and valleys that separate the three communities remain in permanent open space (see Figure 1). As a Concept Plan it is intended to provide a "vision" of Open Space and Parkland and how public and private land uses can be compatible within the Cooperative Planning Area. As a policy program and framework it is intended to organize current and future planning and give direction to ongoing plan implementation activities. The policies set forth in this phase may be refined, expanded, and detailed in future phases of planning and eventually incorporated into the General Plans of the member local governments.

Defining the Plan Vision

This is a plan among the cities and county joining together in the spirit of their common interests and common goals. It is based on joint commitment to long term community good will and to maintain a strong cooperative planning process. This phase of work defines a "vision" of permanent open space and regional parkland that can be shared and enjoyed by the public and provides a "blueprint" of basic policies for how that vision is to come about.

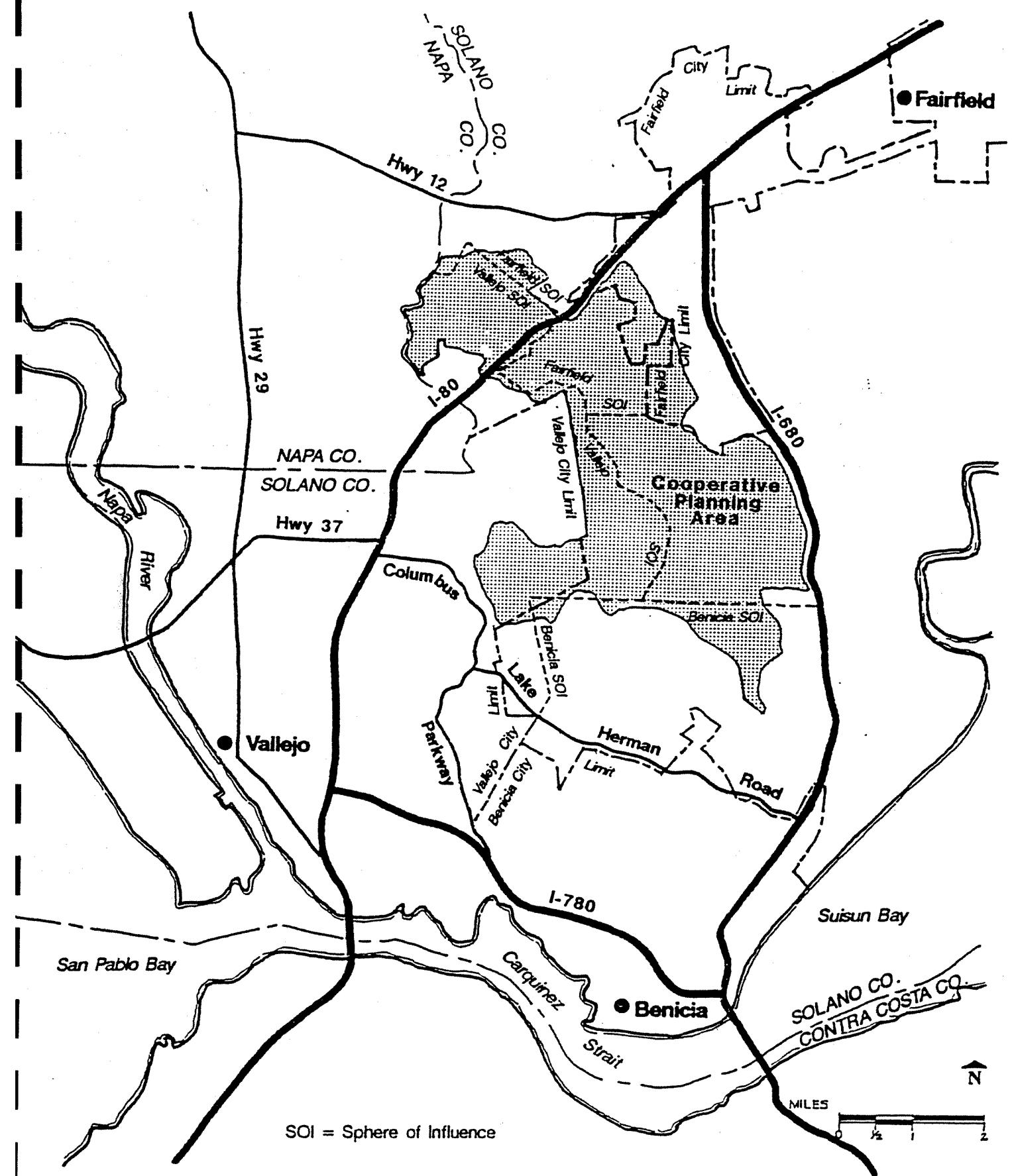
The vision is for a major regional open space and parkland area for the North Bay area which is similar in character and scope to the major parkland and open space facilities of the East Bay Regional Park District, the Mid-Peninsula Regional Open Space District, and other Counties of the Bay Area. These large scale lands provide the adjacent urban areas the much needed opportunities to experience nature and enjoy outdoor recreation. At the same time, these areas include "working open space" which incorporates a variety of open space land uses.

1.2 HISTORY OF THE TRI-CITY AND COUNTY COOPERATIVE PLANNING GROUP

History

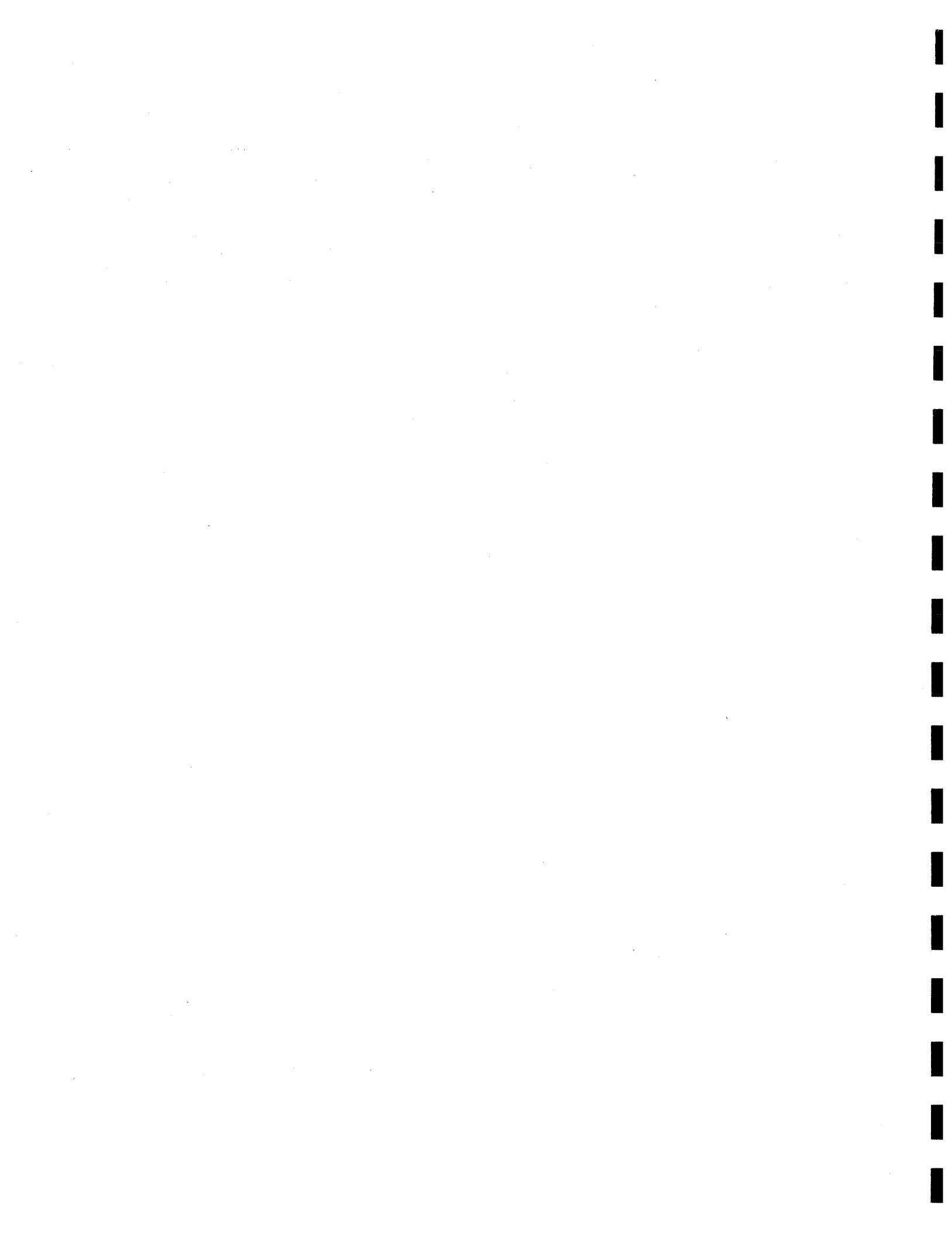
In an effort to effectively plan for the 10,000 acres of open space land between their three communities, the Cities of Benicia, Fairfield and Vallejo and the County of Solano entered a Joint Powers Agreement (JPA) in May of 1992 to jointly and cooperatively plan for, manage and maintain the land for open space preservation, conservation and enhancement uses, agricultural production, and regional parkland recreation. The JPA created a Tri-City and County Regional Park and Open Space Group ("Group") (now referred to as the Tri-City and County Cooperative Planning Group) responsible for preparing, adopting, revising, amending, funding, and implementing a Regional Park and Open Space Preservation Plan (now referred to as Cooperative Plan for Agriculture and Open Space Preservation) for the Cooperative Planning

Area. The Group is governed by a Governing Board consisting of one elected official from each of the four member agencies.



LOCATION MAP

Figure 1



This Concept Plan and Policy Program for the Cooperative Planning Area provides a framework for permanently preserving open space and the future master planning of the Cooperative Planning Area. Policies for recreation areas and trail corridors; open space preservation mechanisms and open space uses; natural resources conservation and protection; inter-jurisdictional planning, implementation and management; park development and management; and park operations and maintenance are included in the report.

Interim Management Principles of the JPA Agreement

The Phase II Study established a set of Advisory Interim Management Principles which were to be considered by Solano County and the Cities of Benicia, Fairfield and Vallejo in reviewing and acting upon applications for development entitlements within their jurisdictions until approval of a Plan for the Cooperative Planning Area. These interim principles and planning criteria were incorporated where appropriate into the policy framework set forth in this phase of planning. Upon approval of this Plan, the interim principles will be of no further force and effect.

1.3 PLANNING PROGRAM & PROCESS

Citizens Advisory Committee Task Force Process

This Plan is based on a review of earlier planning studies for the Cooperative Planning Area and surrounding regions, the general plans of the Cities and the County, and consultations with property owners within the Cooperative Planning Area, and staff from each of the affected jurisdictions. Decisions regarding the direction and content of the recommended Plan were made during a series of Citizens Advisory Committee workshops, which were open to the public and attended by members of the general community.

Workshop #1 established the roles of the various groups participating in the planning of the Cooperative Planning Area; explained the process involved in developing a program and concept plan; and identified the primary issues, as well as the major opportunities and constraints of the Cooperative Planning Area.

Workshop #2 identified adjacent development projects which might have an impact on the planning for the Cooperative Planning Area. Specific policies regarding open space and natural resources conservation from each of the jurisdictions were also identified.

Workshop #3 focused on developing a concept plan for recreational uses in the Cooperative Planning Area. A Park and Open Space Opportunities Map,

located in the Appendix, was presented which identified areas worth preserving for recreation and other open space uses based on their agricultural, natural resource, or visual importance. Preliminary park user capacity numbers based on environmental capability were presented, potential recreational uses were identified, and a draft trail concept plan was presented.

Workshop #4 resulted in a consensus on a concept plan for trail corridors and recreation areas. Workshop #5 was an informational meeting by PG&E to explain their proposal to develop wind energy on their property.

Workshop #6 concentrated on discussion of specific planning, regulatory and financial mechanisms which could be implemented to preserve open space permanently. Appropriate land uses permitted by zoning, in particular wind energy generation, were discussed. The consensus was that siting of wind turbines within the Cooperative Planning Area could have merit as long as certain conditions were met and additional detailed analysis demonstrated adequate mitigation of adverse impacts.

Workshops #7, #8, and #9 were intensive work sessions reviewing the draft policy framework document.

Workshop #10 was spent reviewing the plan implementation objectives and policies.

Workshop #11 provided the final opportunity for Committee members, planners, managers, property owners and citizens to comment on the Draft Concept Plan and Policy Program. The document was approved by the Committee, except for policies concerning mineral resources extraction.

Workshop #12 dealt with formulating policies for mineral resources extraction. These policies were approved for incorporation into the report.

Roles and Responsibilities

Development of the Concept Plan and Policy Program Phase Report resulted from a collaborative effort of different groups working together to produce a feasible plan. A description of each group and their role follows below.

Citizens Advisory Committee. A 12-member Citizens Advisory Committee, comprised of three citizen representatives appointed by the governing body of each of the four jurisdictions, attended a series of planning workshops led by the Consultant and provided decisions on the direction and content of the Plan.

Planning Advisory Group. This group consists of a planner from each of the three Cities, Solano County and the Greater Vallejo Recreation District

(GVRD). This group advised the Consultant and the Citizens Advisory Committee on the relationship of the Plan to existing City and County policies, and acted as the liaison between the Citizens Advisory Committee, the Management Group and the Consultant.

Management Group. This group consists of the City Managers of the three Cities, the County Administrator and the General Manager of GVRD. Their role was to inform the Group Governing Board of the Citizens Advisory Committee progress in connection with Plan development regarding the planning and management of the Regional Park and Open Space Area.

Group Governing Board. The Board was established by the JPA Agreement and consists of elected officials from the four jurisdictions. The Board will review this Plan and make the ultimate decisions regarding the Cooperative Planning Area. Many decisions of the Board must be ratified by the legislative bodies of each of the Cities and the County.

Property Owners. This group consists of affected property owners within the designated Cooperative Planning Area. They informed the Consultant and Citizens Advisory Group of the present and future plans for their property.

Plan Review and Adoption

This Plan will become effective upon approval by Solano County and the cities of Benicia, Fairfield, and Vallejo. In accordance with Joint Exercise of Powers Agreement creating the Group, the review process is expected to proceed as follows:

1. **Group Governing Board Workshop.** The Plan will be presented to the Group Governing Board at an informational workshop. The Governing Board will hear public testimony regarding the Plan. No action on the Plan will be taken at this workshop.
2. **Environmental Review.** Staff from the County and each of the cities will jointly conduct environmental review required by the California Environmental Quality Act (CEQA).
3. **County and City Workshops.** The Plan and environmental review documents will be presented in informational workshops with the Planning Commissions, City Councils, and Board of Supervisors. No approvals will be sought at these workshops.
4. **Public Hearing.** Following completion of the workshops and environmental review process, the Group will consider the environmental review document and hold at least one public hearing on

the Plan.

5. **Plan Adoption.** The environmental document will be approved and the Plan (or a revised Plan) will be adopted by the Group Governing Board. The Plan will not become effective, however, until it is approved by each of the cities and Solano County through the public hearing process. If significant amendments to the Plan are proposed by the Governing Board, the Governing Board will refer those amendments to the Citizens Advisory Committee, or its successor, for its recommendations. (See Appendix 6.9)
6. **Planning Commission Review.** The environmental review document and the Plan approved by the Group Governing Board will be considered at one or more public hearings as a general plan amendment to the general plans of each of the cities and the County. Accordingly, the Plan and any related general plan amendments will be considered by the Planning Commission in each city and the County according to the procedures generally applicable to general plan amendments including those for public hearings.
7. **City Council/Board of Supervisors Approval.** The Plan and any related general plan amendments will be considered by the City Council at one or more public hearings in each of the cities and by the County Board of Supervisors. The Plan will become effective upon approval by each City and the County.
8. **Plan Amendment.** Plan amendments may be initiated by the Group or upon request of a Group member. Plan amendments shall become effective upon their approval by each city Council and the Board of Supervisors. Upon initiating any amendment to a member agency General Plan that would be inconsistent with this Plan, the member agency's planning commission shall request the Group to initiate an amendment to this Plan that would resolve the inconsistency. (See Appendix 6.9)

Future Planning Phases

This Plan lays the policy groundwork for open space preservation in the Cooperative Planning Area and provides the blueprint for the next steps in the planning for the Cooperative Planning Area. Future planning for the Cooperative Planning Area is dependent upon funding and will include development of a Comprehensive Regional Park and Open Space Preservation Master Plan in an open and public process.

At this detailed Master Plan phase, planning for the Cooperative Planning Area

for Agriculture and Open Space will address environmental baseline and impact analysis, open space management and recreation planning, parkland development, management, and operations at a level of detail similar to a Specific Plan. The planning steps will include: the preparation of a Draft Master Plan integrated with a Draft Environmental Impact Report, public review and comment, and final adoption of the Final Master Plan and Final EIR. It is anticipated that the Master Plan, like this Plan, will be incorporated into the General Plans of all members of the Group, much as a Specific Plan or Overlay District forms the basis for a General Plan amendment.

1.4 REPORT ORGANIZATION

The report is organized into six chapters. An **Executive Summary** at the beginning of the document summarizes and highlights the report contents. The first chapter, **Introduction**, addresses the purpose and scope of the report, the history of the Joint Powers Authority Agreement, and the planning process.

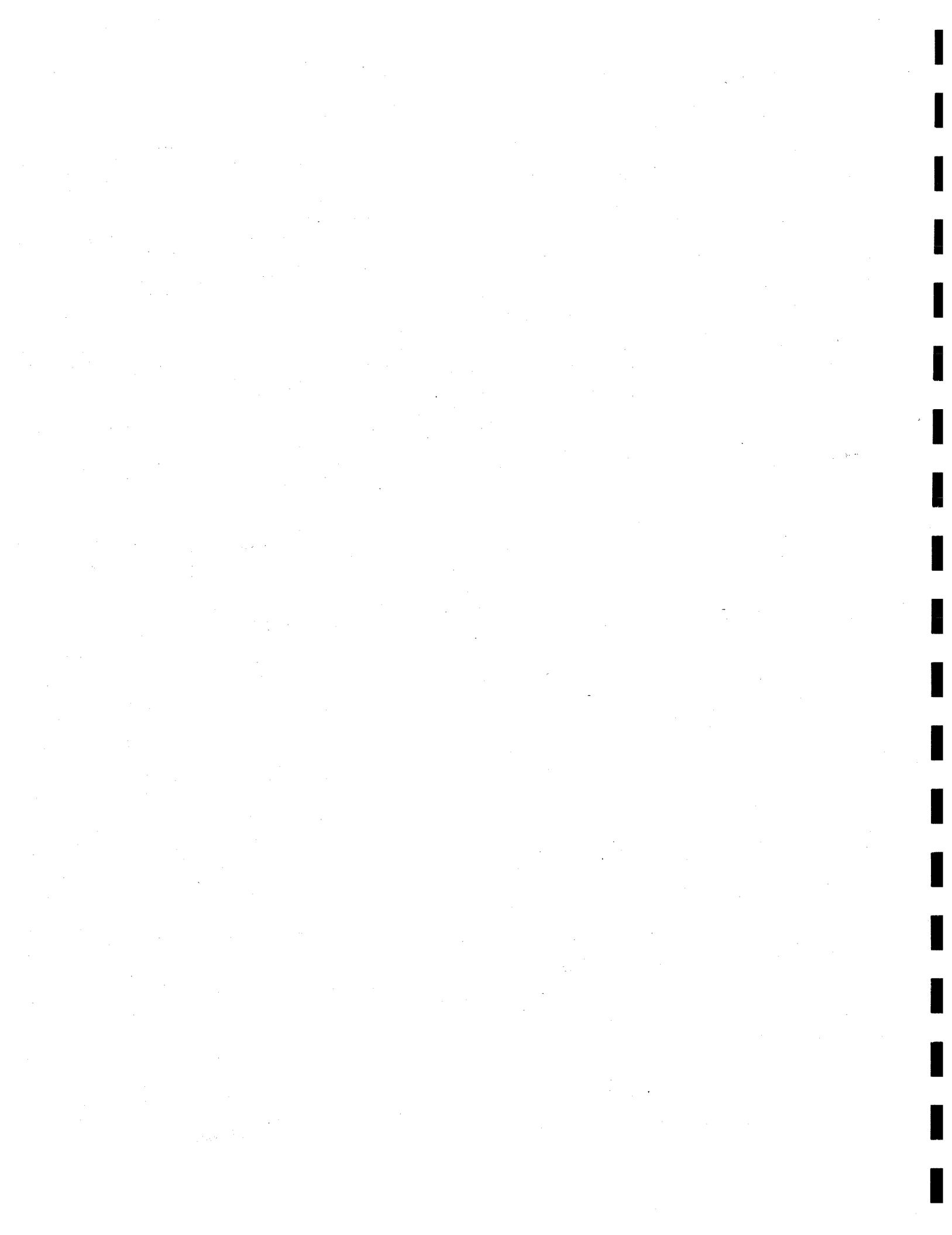
The second chapter, **Overall Goal and Objectives Summary**, identifies the overall goal and primary objectives of the Plan which provide the basic framework for the development of specific regional park and open space preservation policies.

The third chapter, **Open Space Preservation Objectives and Policies**, deals with the various means for permanently preserving, conserving, and protecting open space.

The fourth chapter, **Regional Park and Recreation Objectives and Policies**, addresses each of the six potential recreational areas, the potential uses for each area, and a potential regional trail system.

The fifth chapter, **Cooperative Plan for Agriculture and Open Space Preservation Implementation Objectives and Policies**, addresses the implementation of the future planning, development, management and maintenance of the Regional Park and Open Space.

The final chapter, **Appendices**, includes supplemental information used in developing the concept plan and program policies.



2.0 Overall Planning Goal and Objectives Summary

The following goal statement forms the basis of the planning objectives and policy framework set forth in the document. The intent of this policy plan is to provide a comprehensive framework of policies which provide a clear statement of intent and a clear direction for future planning and joint action by the members of the Group.

2.1 COOPERATIVE PLAN FOR AGRICULTURE AND OPEN SPACE PRESERVATION GOAL. Establish permanent open space between the Cities of Benicia, Fairfield and Vallejo through the joint planning and management of a Cooperative Planning Area for Agriculture and Open Space ("Cooperative Planning Area") which furthers the mutual recreation, open space, habitat, managed resources production and agricultural resources protection policies of the members of the Group.

This general goal serves two major purposes:

1. To implement the mutual desire to provide an open space buffer between urban areas, and ensure the lasting availability of recreational, open space, agricultural and natural resources to the residents of the Cities and County.
2. To ensure that services supporting urban development will not be extended into the Cooperative Planning Area and no urban development will be permitted in the Cooperative Planning Area.

2.2 SUMMARY OF PLANNING OBJECTIVES

The objectives set forth below are intended to accomplish the goal of the Plan. Four of the objectives address open space preservation and management, one deals with regional park and recreation uses, and three provide for Plan implementation. These are summarized below and appear in the following chapters together with supporting policies. The Cooperative Planning Area objectives will guide the preparation of the Master Plan and the future development and management of the Cooperative Planning Area.

Open Space Preservation and Management

- 2.21 Permanent Open Space Objective.** Secure and protect permanent open space through the application of a variety of overlapping and reinforcing planning, regulatory, and financial measures.
- 2.22 Agricultural and Compatible Open Space Use Preservation Objective.** Provide for the preservation of agricultural land use and compatible open space uses because of their importance to the economy, the continuation of the agricultural heritage of the area, and to visually preserve the rural character of the area.
- 2.23 Wind Energy Development Objective.** Where renewable wind energy resources are proposed to be developed within the Cooperative Planning Area, ensure that such development is compatible with off-site and on-site visual impacts, environmental concerns, and recreational and open space uses, and that impacts to these resources are mitigated through appropriate open space preservation and recreational access policies.
- 2.24 Mineral Resources Extraction Objective.** Recognize the potential for the managed production of mineral resources within the Cooperative Planning Area by establishing reasonable limits on the extent of mineral extraction activity consistent with State law, and planning for recreational uses in a manner that limits the potential for conflict between such uses and mineral development activities.
- 2.25 Open Space Resources Preservation and Conservation Objective.** Preserve, conserve and enhance lands with special open space value for wildlife habitat, natural and visual resources, cultural identity and public safety.

Regional Park and Recreation

- 2.26 Regional Park and Recreation Objective.** Provide for the present and future needs for compatible regional outdoor recreational opportunities in the County through continued recreation planning for the Cooperative Planning Area.

Plan Implementation

- 2.27 Inter-jurisdictional Planning, Implementation and Management Objective.** Continue inter-jurisdictional cooperation and coordination of joint planning, implementation, and management of the Cooperative Planning Area through the continued operation of the Tri-City and County Cooperative Planning Group.

- 2.28 Park Development and Management Objective.** Develop a phased program of park facilities development and management structure through preparation of a Comprehensive Regional Park and Open Space Master Plan.
- 2.29 Park Operations, Maintenance and Public Education Objective.** A program for park operation, maintenance and public education shall be developed. The Comprehensive Regional Park and Open Space Master Plan should incorporate standards for efficient park operations and maintenance, and should provide guidelines for continual monitoring of park operations.

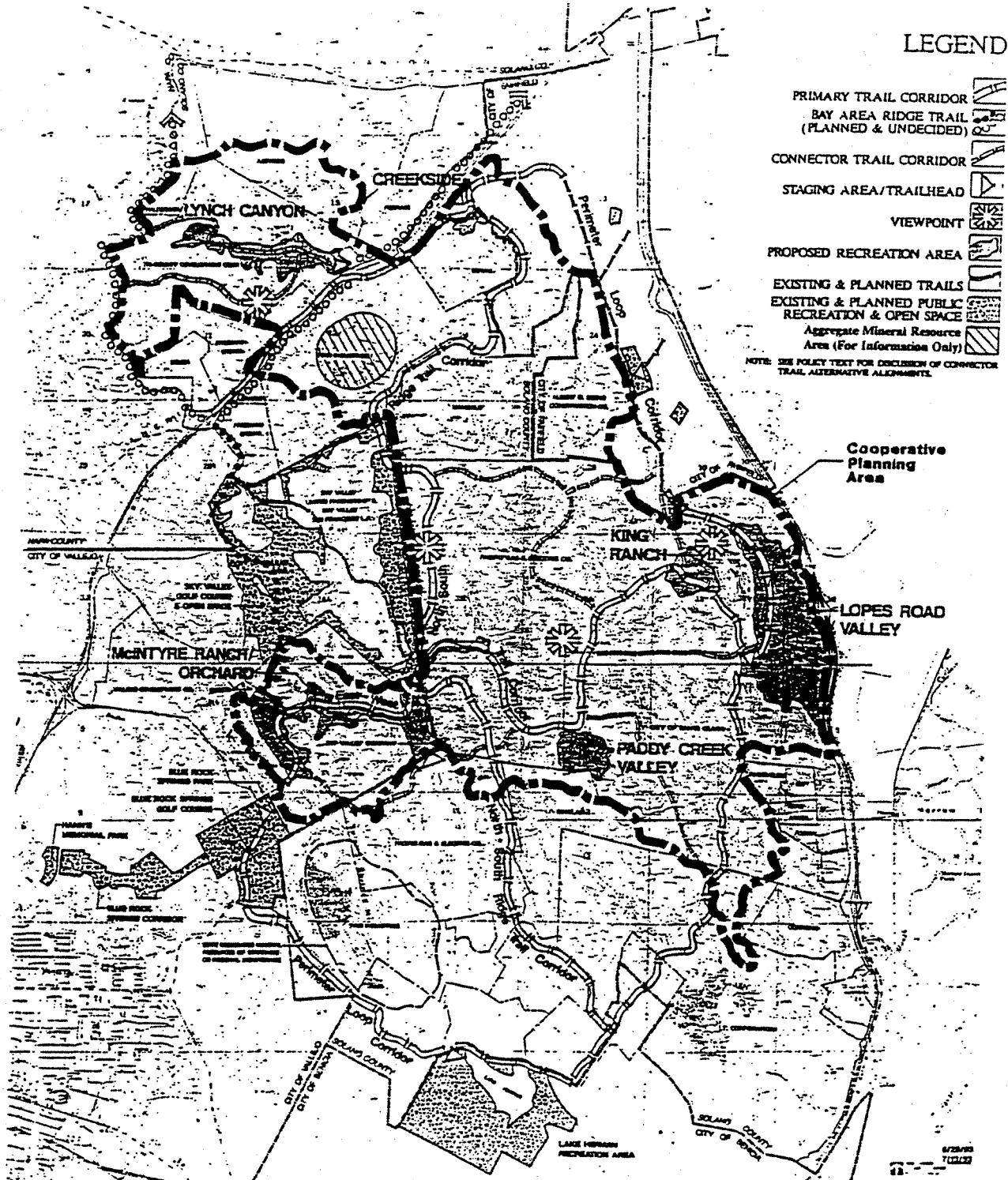
2.3 REGIONAL PARK AND OPEN SPACE PRESERVATION PLAN POLICY MAP

The Cooperative Plan for Agriculture and Open Space Preservation Policy Map (Figure 2) designates the boundary of the Cooperative Planning Area for which the recommended policies for preserving open space and establishing regional park recreational opportunities are set forth. These policies are discussed in Chapters 3.0, 4.0 and 5.0.



LEGEND

- PRIMARY TRAIL CORRIDOR
BAY AREA RIDGE TRAIL
(PLANNED & UNDECIDED)
- CONNECTOR TRAIL CORRIDOR
- STAGING AREA/TRAILHEAD
- VIEWPOINT
- PROPOSED RECREATION AREA
- EXISTING & PLANNED TRAILS
- EXISTING & PLANNED PUBLIC RECREATION & OPEN SPACE
- Aggregate Mineral Resource Area (For Information Only)
- NOTE SEE POLICY TEXT FOR DESCRIPTION OF CONNECTOR TRAIL ALTERNATIVE ALIGNMENTS.



COOPERATIVE PLAN FOR
AGRICULTURE AND OPEN SPACE
PRESERVATION POLICY MAP

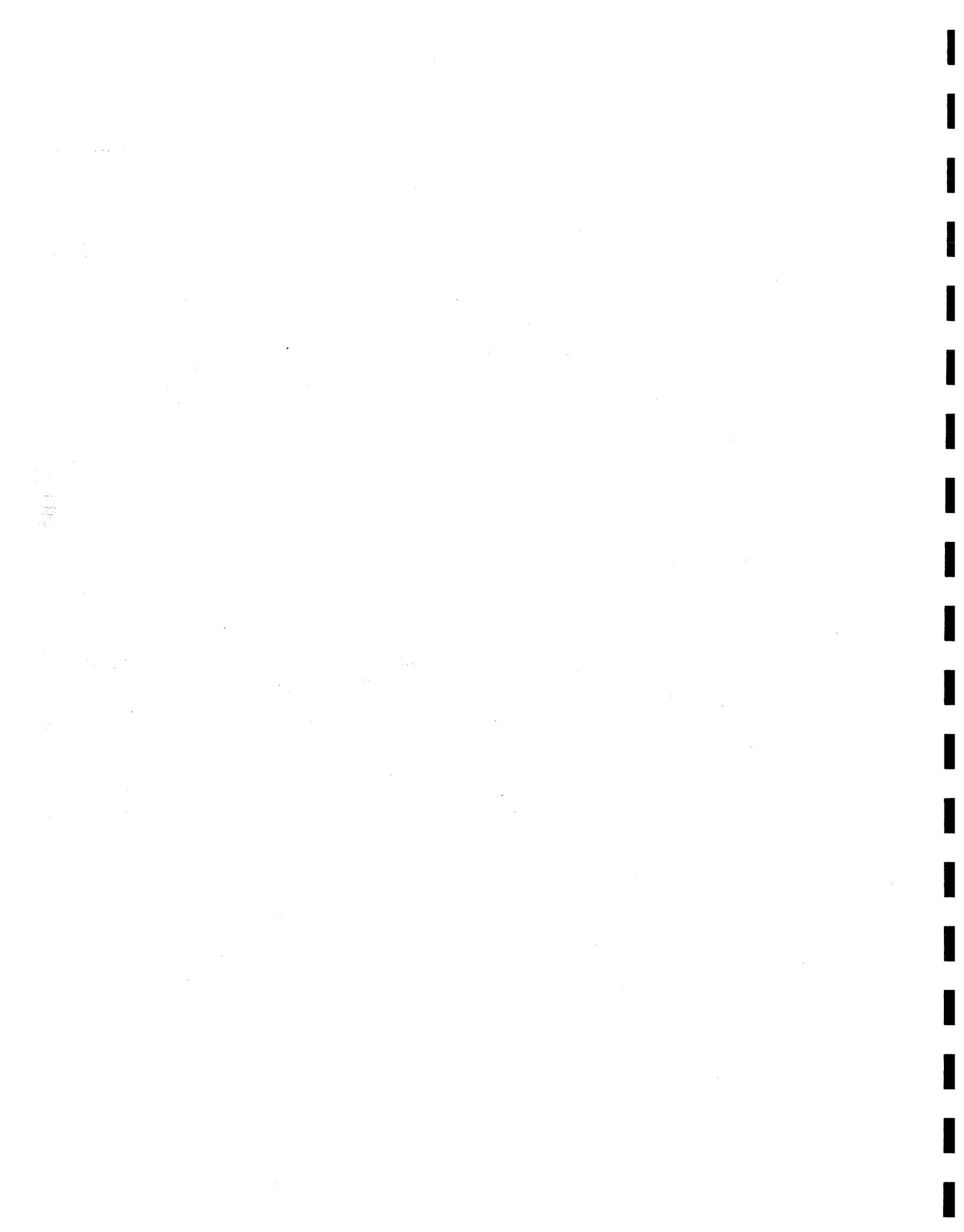
Tri City and County
Cooperative Plan For
Agriculture and Open Space



Produced by:
THE TRI-CITY & COUNTY
REGIONAL PARK AND
OPEN SPACE GROUP

Solano County
Cities of Benicia,
Fairfield & Vallejo

Figure 2



3.0 Open Space Preservation Objectives and Policies

Open space preservation will require utilization of appropriate methods of preserving land as permanent open space. Each property within the Cooperative Planning Area has its own unique set of issues and concerns, and must be dealt with individually regarding open space preservation mechanisms and plan implementation actions.

This chapter is organized around four open space objectives which form the open space preservation framework. These objectives address:

1) permanent open space implementation, 2) agricultural and compatible open space use preservation, 3) wind energy development, and 4) open space resources preservation and conservation. Each of these objectives is supported by a set of policies. Background information, where necessary, is included after the policy statement. Mineral resources extraction is an open space use that should also receive consideration in Cooperative Planning Area planning.

3.1 PERMANENT OPEN SPACE OBJECTIVE. Secure and protect permanent open space through the application of a variety of overlapping and reinforcing planning, regulatory, and financial measures.

Permanent Open Space Use Designation

3.1.1 Permanent Open Space Use and Boundary Policy. The Cooperative Planning Area boundary shown on the Permanent Open Space Use and Boundary Policy Map (refer to Figure 3) designates the area to be preserved for permanent open space uses that conform to the policies of this Plan. Permanent open space uses include open space for the preservation of natural resources, the managed production of resources, outdoor recreation, and open space for public health and safety.

Planning and Regulatory Measures Policies

Planning and regulatory measures represent the primary powers by which county and city governments provide for open space, parks and recreation, and recreational trails. The Cooperative Planning Area is currently regulated by the Solano County General Plan and Zoning Ordinance. Since it also lies

partially within the City Limits of Vallejo and Fairfield and in the Sphere of Influence of the three Cities, it is also governed by their municipal General Plans and Zoning Ordinances. The following policies shall be applied in the Cooperative Planning Area:

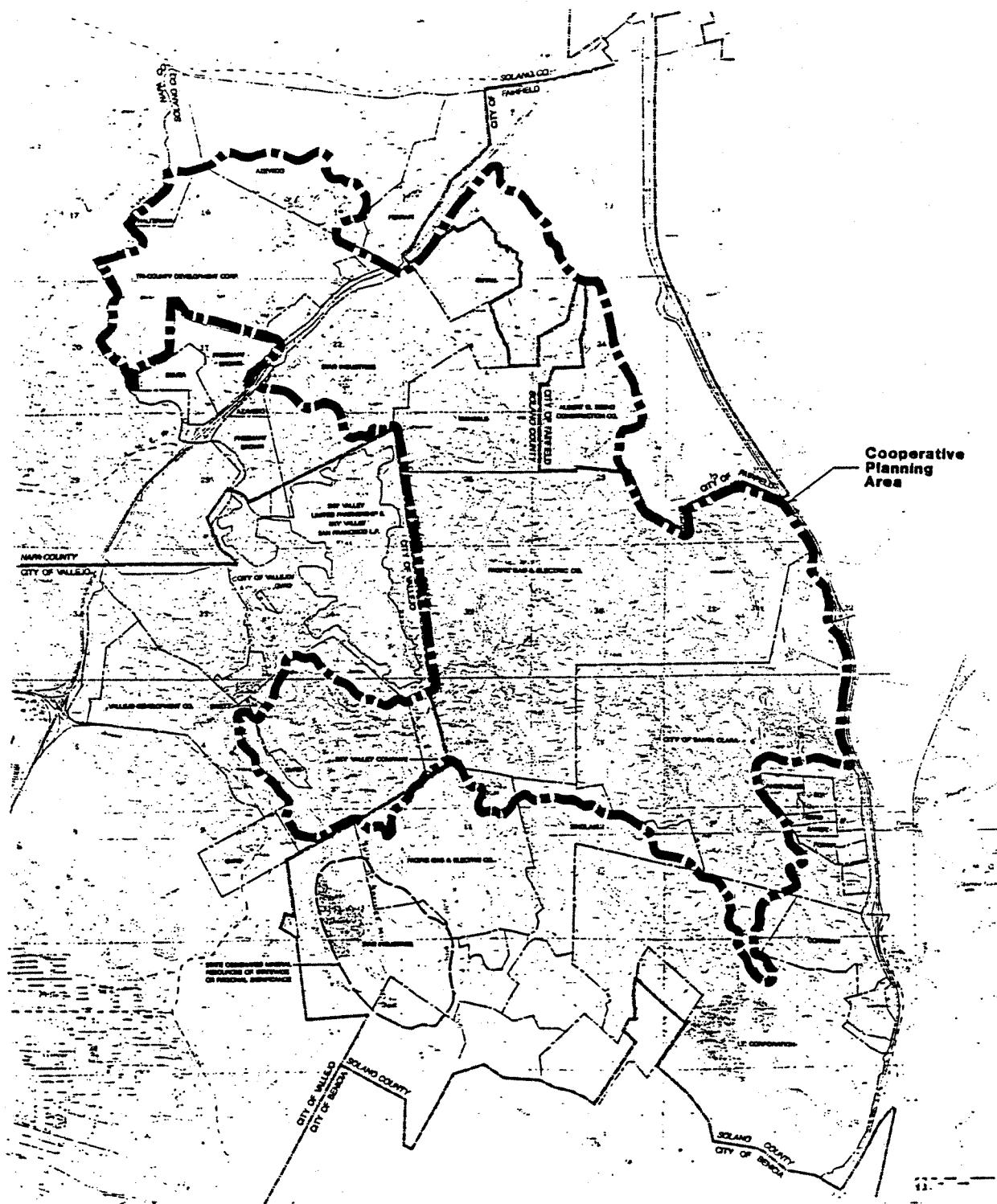
3.1.2 General Plan Uniformity Policy. The Tri-City and County Plan adopted by the Group should be incorporated into the General Plans of all four jurisdictions to ensure General Plan uniformity. The Plan may be adopted as an overlay to each General Plan in this location or as an insert to each General Plan similar to the relationship of a General Plan to a Specific Plan.

Discussion: The Solano County Land Use and Circulation Element designates lands in the Cooperative Planning Area as "Extensive Agriculture". Extensive agriculture designates lands used primarily for non-irrigated farming and grazing. It also includes lands with significant natural hazards such as high wildfire risk, unstable soils, high susceptibility to landsliding and geologic faults, which would pose potential health and safety hazards if developed for urban use.

Acceptable land uses within this designation include agriculture and uses related to agriculture. Other uses may be allowed through the use permit process. In the County's Land Use and Circulation Element, Park and Recreation Element, and Resource Conservation and Open Space Plan, the hills separating Vallejo, Benicia and Cordelia are identified as a Scenic Amenity and a Community Separator area, meaning they are an important visual feature providing a visual buffer between each community.

The land use designation of the portion of the Cooperative Planning Area within the City of Fairfield city limits is "Extensive Agriculture", and the designation of the area within the City of Vallejo city limits is "Conservation". The portion of the Cooperative Planning Area within the Sky Valley Vallejo Specific Plan is currently designated "Open Space" and "School/Park Site". These designations are consistent with the policies presented in this Plan.

By incorporating the Tri-City and County Cooperative Planning Group Plan into their General Plans the Cities and the County will affirm their commitment to effective joint open space planning and will ensure that consistent land use policies are applied throughout the Cooperative Planning Area.



**PERMANENT OPEN SPACE USE
AND BOUNDARY POLICY MAP**

**Tri City and County
Cooperative Plan For
Agriculture and Open Space**



Prepared for:
THE TRI-CITY & COUNTY
REGIONAL PARK AND
OPEN SPACE GROUP

Solano County
Cities of Benicia,
Fairfield & Vallejo

Figure 3

3.1.3 County Zoning Designation Policy. For zoning purposes, allowable uses are intended to be those uses currently provided under existing County zoning policy set forth in Exclusive Agricultural (A-20) Zoning.

Discussion: The purpose and intent of the A-20 zoning is to protect lands best suited for agricultural use from the encroachment of incompatible uses. This zoning allows primarily agricultural uses, uses accessory to agriculture, and homes on 20-acre parcels. Other compatible open space uses permitted by the conditional use permit process include such uses as feed yard, agricultural products processing, solid waste disposal facilities, farm labor quarters, kennels, cemetery, public stables, horse shows, clubs or resorts for swimming, boating, fishing, hunting or shooting, public service facilities such as nursery school, church or nursing home, roadside stands, rural resident enterprises, various agricultural services, fertilizer plant and yards, and single-family dwellings which are accessory to the agricultural use of the property. (See Appendix for the full text of the A-20 zoning ordinance).

3.1.4 County A-20 Cluster Zoning Policy. If Solano County's current limitation on planned unit developments expires, cluster zoning should be permitted in the Cooperative Planning Area where it will facilitate permanent preservation of open space.

Discussion: A cluster development policy would give landowners the option of developing their property either by building one unit per 20 acres as allowed by current County zoning or by clustering the total number of units allowed in one area (in proximity to available road access, water, and wastewater disposal) and dedicating an open space or agricultural use conservation easement over the undeveloped portion of the property. Solano County's Measure A currently prohibits cluster residential developments (Planned Unit Developments) on lands designated Extensive Agriculture in the County General Plan. Upon expiration of Measure A on December 31, 1995 or through an earlier amendment by initiative, the County should consider a limited amendment to this policy. To promote the open space goals of this Plan, cluster residential development should be allowed within the Cooperative Planning Area where such development will ensure permanent protection of adjoining open space.

3.1.5 City Zoning Designation Policy. The zoning designation for portions of the Cooperative Planning Area within the city limits of Fairfield and Vallejo shall conform to the Tri-City and County Plan.

3.1.6 SMARA Reclamation Policy. Mineral resource extraction activities within the Cooperative Planning Area shall be conducted in compliance with the Surface Mining and Reclamation Act of 1975 (SMARA) so that mined lands are reclaimed to a condition compatible with other open space uses.

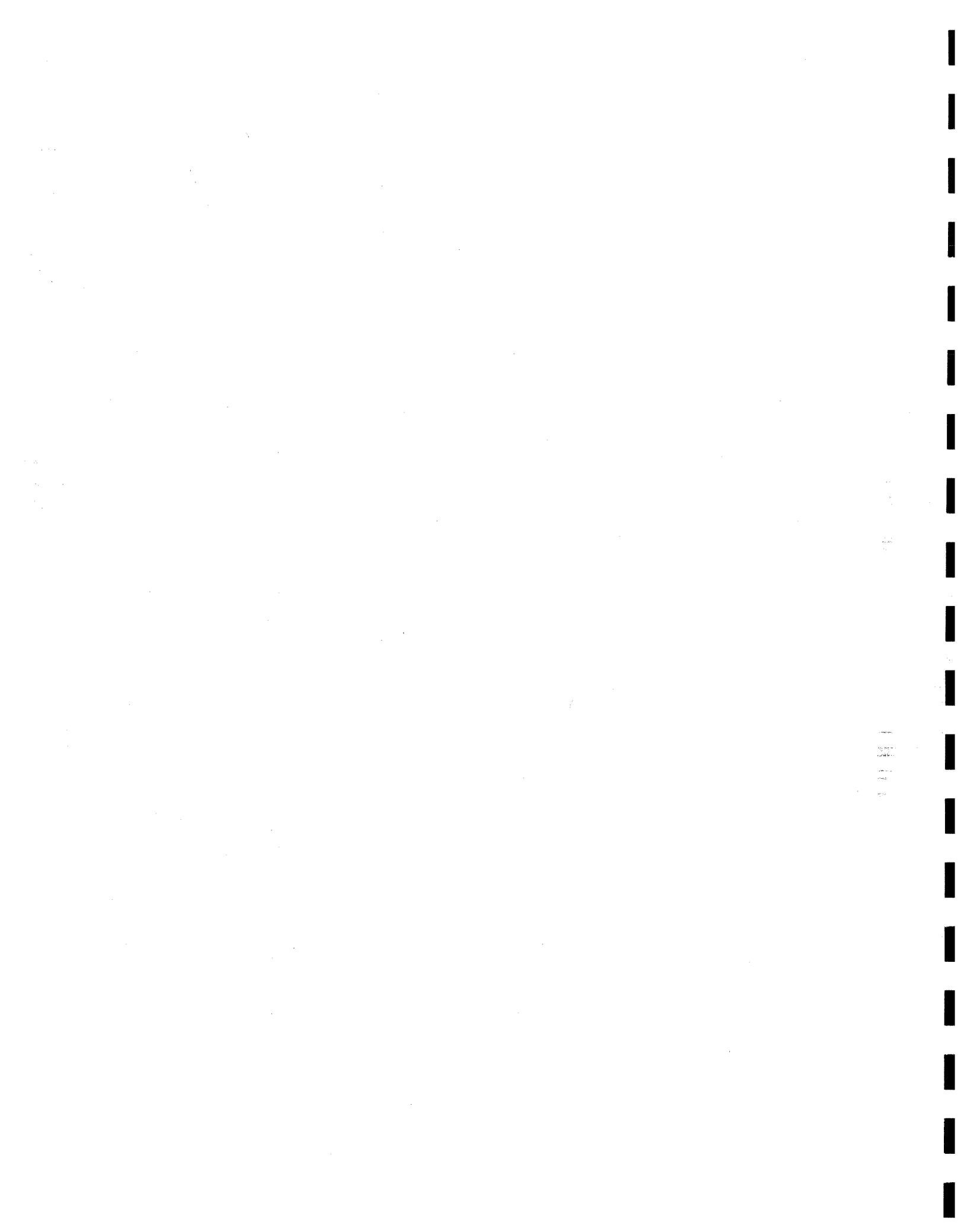
Private Ranchland Open Space Preservation Measures

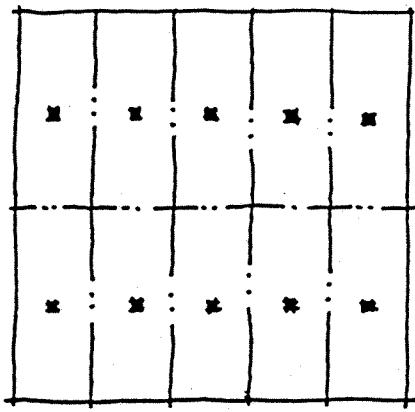
To protect the open space values associated with long established private agricultural land uses in the Cooperative Planning Area, preservation measures should be selected which best fit 1) the specific circumstances of individual property owners; 2) private land use conditions; and 3) the preservation and management of open space land.

3.1.7 Private Ranchland Open Space Preservation Measures Policy. On private ranchlands where A-20 zoning permits development of one unit per 20 acres, such development shall be allowed to the extent consistent with applicable land use regulations. However, the Group and City or County with land use jurisdiction over such lands shall cooperate with the landowner to consider alternatives that would allow the landowner to retain a homesite and family estate and recognize any remaining development value in a manner consistent with open space preservation. Alternatives considered in this process, illustrated in Private Ranchland Open Space Preservation Measures (Figure 4), should include:

- 1. Transfer of Development Rights.** This alternative would allow transfer of development rights from within the Cooperative Planning Area to sites elsewhere in the Cities or the County in those circumstances in which the impacts of increased density in the Cities or County outside the Cooperative Planning Area can be mitigated by increased open space preservation within the Cooperative Planning Area. The landowner would be compensated for the transferred development rights by a private or public purchaser and, in exchange, would dedicate a permanent open space or agricultural use conservation easement over the undeveloped portion of his or her property.
- 2. Purchase of Development Rights.** Under this alternative the development rights of the property would be purchased by the implementing agency where such funds are available.
- 3. Clustering of Permitted Dwelling Units.** This alternative would allow permitted dwelling units to be clustered in an approved developable area of the property. This would allow the remainder of the property to be retained in agricultural open space.

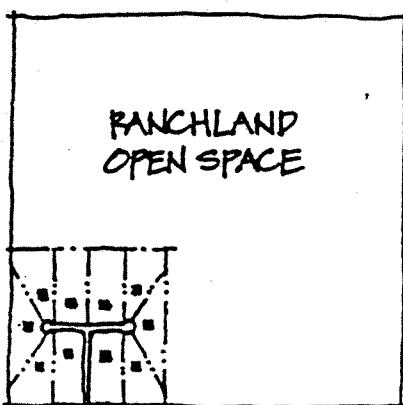
Discussion: Although standard parcelization into 20-acre lots is still permitted under A-20 zoning, transfer of development rights, purchase of





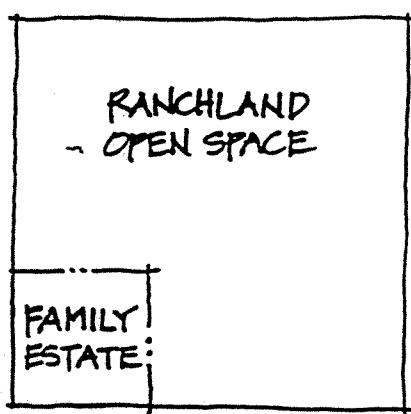
A-20 DEVELOPMENT

PARCEL SIZE: 200 ACRES
ALLOWABLE UNITS: 10
LOT SIZE: 20 ACRES



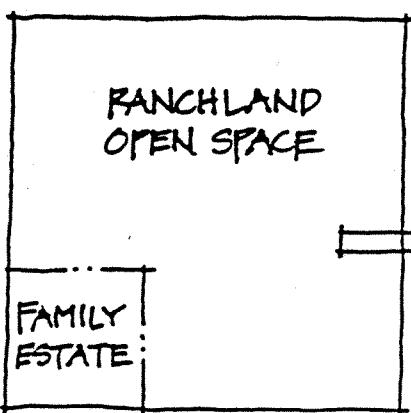
CLUSTER DEVELOPMENT

- DEVELOPMENT OF 10 DU'S ON SMALLER LOTS CLUSTERED ON A DEVELOPABLE PORTION OF PROPERTY
- REST OF LAND RETAINED IN RANCHLAND OPEN SPACE



PURCHASE DEVELOPMENT RIGHTS

- DEVELOPMENT RIGHTS TO 9 DU'S PURCHASED BY IMPLEMENTING AGENCY
- 1 FAMILY ESTATE RETAINED BY LANDOWNER
- REST OF LAND RETAINED BY LANDOWNER IN RANCHLAND OPEN SPACE



TRANSFER DEVELOPMENT RIGHTS

- DEVELOPMENT RIGHTS TO 9 DU'S TRANSFERRED TO LAND OUTSIDE MANAGEMENT AREA
- FAMILY ESTATE RETAINED BY LANDOWNER
- REST OF LAND RETAINED BY OWNER IN RANCHLAND OPEN SPACE

PRIVATE RANCHLAND OPEN SPACE PRESERVATION MEASURES

Figure 4

development rights, or clustering of permitted dwelling units are the preferred mechanisms in the Cooperative Planning Area to facilitate preservation of open space. After the development rights to the land have been transferred, purchased, or clustered, a conservation or open space easement shall be attached to the deed of the property prohibiting the landowner from future development as set forth in Policy 3.1.10.

Other Private Open Space Preservation Measures include:

4. Life Estates with Land Donations. The Group may negotiate life estate arrangements to allow an existing landowner to live on his or her property until death, when the Group would take over the property. Life estate arrangements can be granted as part of a fee title purchase arrangement or as part of a land donation for tax reduction purposes.

5. Williamson Act Contracts. Landowners whose property is located within an agricultural area designated in a General Plan may agree to restrict the use of the land to agricultural or conservation purposes for a 10-year term which renews automatically each year, in exchange for a reduction in property tax assessment valuation.

Public Open Space Acquisition Measures

3.1.8 Supporting Financial Measures Policy. Various financial mechanisms dealing with acquisition of property or of easements, or which rely on utilization of specific targeted funding sources for implementing open space and recreational programs should be utilized where applicable, to support and assist the implementation of open space preservation. These include local, state and federal revenue sources and may include, but are not limited to, bond initiatives, and matching grants available through sources such as the Robert-Z'Berg-Harris Fund, State Park Development and Acquisition Funds, Land and Water Conservation Funds, Nature Conservancy Funds, ISTEA, and others.

3.1.9 Property Owners Rights Policy. Property owners' rights shall be respected during the process of open space acquisition or protection. Public access will be allowed only with consent of the property owner.

3.1.10 Open Space and Agricultural Use Conservation Easement Policy. All open space and agricultural use conservation easements issued in connection with clustering of permitted development units, transfers of development rights, and purchase of development rights pursuant to Policy 3.1.7 shall be held by the Group or a non-profit entity or other public entity qualified under section 170(h) of the Internal Revenue Code (or any successor provision then applicable) and authorized to accept and hold such easements under California Civil Code Section 815.3 (or any successor then applicable). Acceptance or

modification of any easement pursuant to this policy shall be approved by a majority of the members of the Group Governing Board.

Discussion: Open space easements, made available through the Open Space Easement Act of 1974, are rights or interests in open space land acquired by local governments or nonprofit organizations where a deed or other instrument granting such right or interest imposes restrictions on the use of the land in order to effectively preserve the natural or scenic character of open space land. An open space easement contains a covenant with the county, city, or nonprofit organization running with the land, that the landowner will not construct improvements except those which would not be inconsistent with maintaining and preserving the natural or scenic character of the land. A conservation easement, established through the California Conservation Easement Act of 1979, is virtually identical to an open space easement, with the exception that the easement can be granted to a private organization or individual instead of a local government or nonprofit organization.

The removal of development rights from a parcel and the addition of an open space or conservation easement does not mean that a property owner loses title to his/her land, nor does it automatically provide for public access. Landowners still retain title to the land to continue ranching or other agricultural uses. Only the right to develop the remainder of land for residential use is removed. In addition to monetary benefits received from the sale or transfer of development rights, property owners could also receive a reduction in property tax assessments and an income tax deduction.

3.2 AGRICULTURAL AND COMPATIBLE OPEN SPACE USE PRESERVATION OBJECTIVE. Provide for the preservation of agricultural land use and compatible open space uses because of their importance to the economy, the continuation of the agricultural heritage of the area, and to visually preserve the rural character of the area.

Agriculture is major industry and constitutes the largest land use in Solano County. The protection of agriculture from further encroachment by incompatible uses is of prime importance.

3.2.1 Agricultural Preservation Policy. Agricultural uses shall continue to be the primary use of land within the Cooperative Planning Area. Park and recreation uses shall not interfere with existing ranching operations. Trail corridors shall be located so as not to interrupt cattle migration patterns and overall ranching operations (such as cattle watering, calving, etc.), or other agricultural activities.

3.2.2 Right to Farm Policy. Promote agricultural land uses within the Cooperative Planning Area and protect such uses from adjoining residential or commercial uses which could interfere with existing agricultural operations through support of the County's Right-to-Farm ordinance.

3.2.3 Compatible Open Space Uses Policy. Only those uses allowed and/or permitted under the existing County A-20 zoning designation shall be allowed in the Cooperative Planning Area, consistent with the policies of this plan.

3.2.4 Reservoir Siting Policy. The siting of future reservoir(s) within the Cooperative Planning Area for water storage and other multiple public purposes, including recreation use should be considered.

3.3 WIND ENERGY DEVELOPMENT OBJECTIVE. Where renewable wind energy resources are proposed to be developed within the Cooperative Planning Area, ensure that such development is compatible with off-site and on-site visual impacts, environmental concerns, and recreational and open space uses, and that impacts to these resources are mitigated through appropriate open space preservation and recreational access policies.

In 1987, Solano County adopted the Wind Turbine Siting Plan to regulate and guide wind energy development on lands within County jurisdiction. The County Siting Plan designates locations within the Cordelia Hills and Collinsville-Montezuma Hills Wind Resource Areas where wind energy development can and cannot occur, and provides a set of development criteria which establishes safety setbacks, scenic resource setbacks, and noise setbacks for wind turbines. If all of the guidelines for siting wind turbines were applied to county lands in the Cooperative Planning Area, which is located within the Cordelia Hills Wind Resource Area, very few turbines could be successfully sited.

The concept of a wind energy park, whereby the open space of the Cordelia Hills could be utilized for public recreational access and enjoyment, as well as wind energy development, has been proposed by PG&E and the City of Santa Clara for lands they own in the Cooperative Planning Area. The State Public Utilities Commission has identified the potential goal of achieving up to 150 megawatts (MW) of renewable energy production within PG&E's Northern and Central California service territory; PG&E has indicated that wind resources in the Cooperative Planning Area could contribute towards that goal. The Citizens Advisory Committee is supportive in principle of the County considering General Plan amendments to allow limited development of renewable energy resources on the condition that the impacts of such development can be fully mitigated. The Committee has reviewed the PG&E and Santa Clara proposals as well as potential wind energy development guidelines.

The following policies and guidelines for future planning are set forth to establish a framework for developing an acceptable wind energy development plan.

3.3.1 Wind Park Benefits Policy. To mitigate anticipated adverse effects of wind energy development to visual and other resources, approval of a wind energy project shall require acquisition of the following public benefits:

- a. Conservation easements for livestock grazing, scenic resource buffers and other public benefit uses to be determined.

- b. Public access easements for recreational trail use and access to public recreational areas.
- c. Fee title dedication (as appropriate) to public ownership of designated public recreation areas.
- d. Capital improvement dedications of trails, trailheads, and park access roads (coordinated with maintenance/service roads).
- e. Local wind energy tax revenues. (See Policy 5.2.4, Wind Energy Revenue Policy)
- f. Additional mitigation as necessary to mitigate all significant impacts of wind energy resource development.

3.3.2 Wind Energy Comprehensive Plan Policy. Prior to consideration of any amendment to the Solano County Wind Turbine Siting Plan, proponents of wind energy development shall prepare a comprehensive wind energy development plan which includes a comprehensive assessment of environmental and planning opportunities and constraints, alternative wind energy development plans, and an evaluation of planning trade-offs. The preferred plan shall reflect all planning trade-offs, satisfy multiple objectives to the greatest, achieve desired public benefits, and mitigate potential environmental impacts. The plan should be developed cooperatively and openly with the Group, the Group Citizens Advisory Committee, the Cities, and the County. The final plan shall include a proposed amendment to the Solano County General Plan Wind Turbine Siting Plan that would allow implementation of the proposed plan subject to the conditions specified in the Plan.

The plan shall address, among other considerations, the following:

- 1. **Visual Impacts**
 - a) Primary visual impact areas
 - b) Secondary visual impact areas
 - c) Siting approaches
- 2. **Wildlife and Habitat Preservation**
 - a) Raptor impacts
 - b) Habitat sites
 - c) Habitat corridors

3. **Geotechnical Impacts**
 - a) Slope stability
 - b) Soil erosion/stormwater management
 - c) Grading for roads, turbine sites, substation, underground and above ground power network
 - d) Consistency with Suisun Marsh Local Protection Plan
4. **Recreation Compatibility**
 - a) Compatibility with recreational trails
 - b) Separate use locations - sense of "park" remains
 - c) "Cluster" turbines in low impact or subordinate landscape areas
 - d) Evaluate siting of turbines in concentrated areas to keep other areas open
 - e) Public safety impacts
 - f) Noise impacts

The Wind Energy Development Plan process shall include opportunities for public review and comment at each of the following stages of plan development:

1. Plan scoping and identification of issues to be addressed in the plan;
2. Completion of draft baseline studies and constraints analysis;
3. Completion of draft alternative strategies for wind energy development;
4. Completion of draft evaluation of alternatives and preferred plan selection.
5. Environmental review of the preferred plan pursuant to the California Environmental Quality Act.

3.3.3 Interim Wind Turbine Visual Impact Siting Policy Guidelines. In conjunction with any additional criteria developed by the Group, the following wind turbine siting guidelines illustrated in Wind Turbine Siting Approaches (Figure 5) shall be analyzed, refined and utilized in evaluating the visual impacts of wind turbine siting in the comprehensive plan for wind energy development:

1. **Primary Visual Impact Preservation Area.** Cooperative Planning Area lands within Primary Visual Impact Areas as illustrated on the Preliminary Wind Turbine Siting Constraints Analysis Map located in the Appendix, shall be avoided for wind turbine siting. This includes any foreground ridgeline adjacent to existing or planned residential development or adjacent to Interstates 80 or 680; and along the highest interior (background)

ridgeline.

2. Secondary Visual Impact Area Siting Area. Cooperative Planning Area lands which are visually subordinate to the Primary Visual Impact Areas (comprising background ridgelines or those of lower elevation, for example) may be acceptable for wind turbine locations, (except the highest, visually prominent elevation(s) shall be avoided) especially using cluster development rather than continuous uniform wind turbine siting.

3. View Shadow Siting Area. Wind turbines may be sited in view shadow areas where wind turbines can reasonably be expected to be visually screened from most major public vantage points (i.e. peripheral highways and residential areas). View shadow siting areas include the following:

- a. **View Shadow (Hidden Back Side) of Ridgeline** within a Primary Visual Impact Area.
- b. **Hidden Interior Ridges** where wind turbines may be sited on the side slopes and ridgetops of interior ridges especially where geotechnical and environmental conditions permit wind turbine concentrations utilizing a "wind wall" approach.
- c. **Hidden Valley Areas** where siting of wind turbines may be concentrated as consistent with geotechnical, environmental and meteorological conditions.
- d. **Glare Reduction.** In addition to appropriate siting as outlined in the Plan, glare reflecting from turbines shall be further reduced by coating all turbines with non-reflective materials and/or otherwise screening them from off-site views by appropriate landscaping.

3.3.4 Park and Open Space Cooperative Planning Area Wind Energy Development Policy. The Cooperative Planning Area forms a logical area for wind energy planning, development and management. These policies are applicable only to those lands within the designated Cooperative Planning Area.

Section 3.3.5. General Principles Regarding Land Owned by the City of Santa Clara. The City of Santa Clara ("Santa Clara") currently owns property located in the County of Solano within the Tri-City and County Cooperative Planning Area for Agriculture and Open Space (the "Property"). Santa Clara has consistently planned for and pursued development of the Property for various public purposes including a permanent source of renewable energy.

Under Government Code sections 53090 and 53091, a "local agency" is required to comply with a city or county's zoning and building regulations.

However, a city is not a "local agency" as that term is defined in these Government Code sections. [See 40 Ops. Cal. Atty. Gen. 243 (1962)]. Therefore, a city is not required to comply with the zoning and building regulations of a county. Pursuant to Lawler v. Redding 7 Cal. App. 4th 778 (3rd Dist. 1992), this exemption also applies to compliance with a county's general plan.

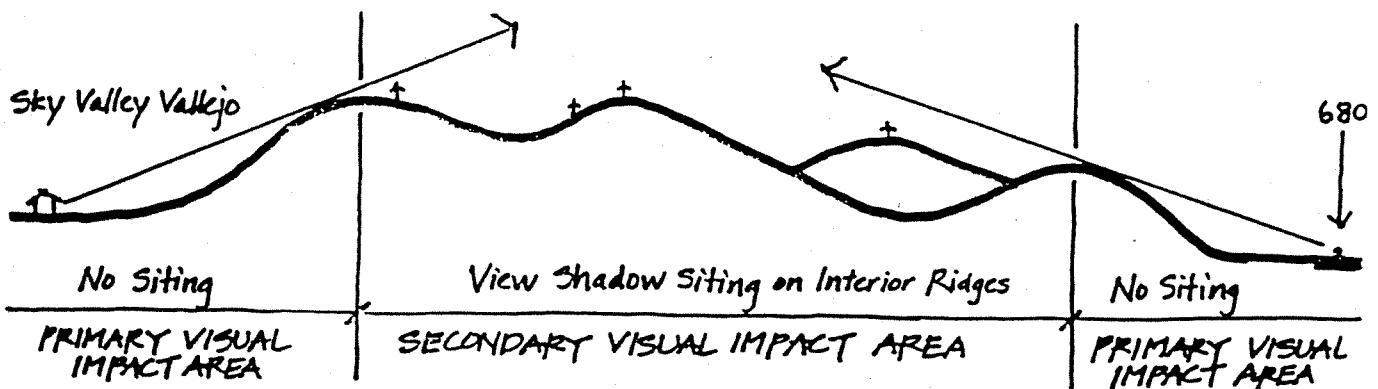
Santa Clara recognizes the great importance of working cooperatively with all interested parties as any City of Santa Clara project proceeds and of giving due consideration to the input of such parties. Accordingly, Santa Clara will take several steps to ensure that all interested parties, and particularly the Group and the Group Citizens Advisory Committee, are included in the planning process. Santa Clara, the Group and the Group Citizens Advisory Committee will coordinate their efforts to ensure that this process will not result in any undue delay.

Section 3.3.6. Processing of the Santa Clara Electric Utility Windfarm Project. Since the purchase of this property by Santa Clara, it has planned to construct and operate (either directly or through agents), a windfarm which would generate renewable energy (the "windfarm project"). Santa Clara plans for the windfarm project to be safe, efficient, cost-effective and state-of-the-art. This windfarm project is now being planned by Santa Clara. Santa Clara recognizes and supports the Group's objective of balancing alternative energy development within the Planning Area with protection to the County's resource areas. Santa Clara will pursue consultation with and advice from the Group and the Group Citizens Advisory Committee in the manner described below.

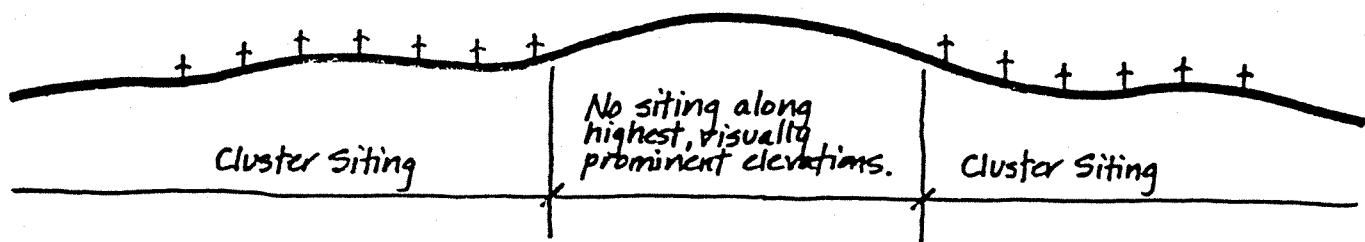
1. Santa Clara will inform the Group and the Group Citizens Advisory Committee of its intent to process a development plan for the windfarm project.
2. When so informed, the Group will designate the Planning Director of the City of Vallejo and the Director of Environmental Management for Solano County to function as members of a team with Santa Clara planning staff to work with the consultants who Santa Clara retains to analyze the environmental impacts of the windfarm project and the factors identified in paragraph 4b. The team will be involved in each of the Wind Energy Development Plan process stages described in the second set of subparagraphs 1-4, section 3.3.2. Santa Clara will be the lead agency for the purposes of the California Environmental Quality Act ("CEQA").
3. Evaluation of alternatives, the assessments referenced in paragraph 4., and preparation of the appropriate type of environmental impact report (the "EIR") covering the windfarm project will be completed as part of

the environmental review conducted pursuant to CEQA.

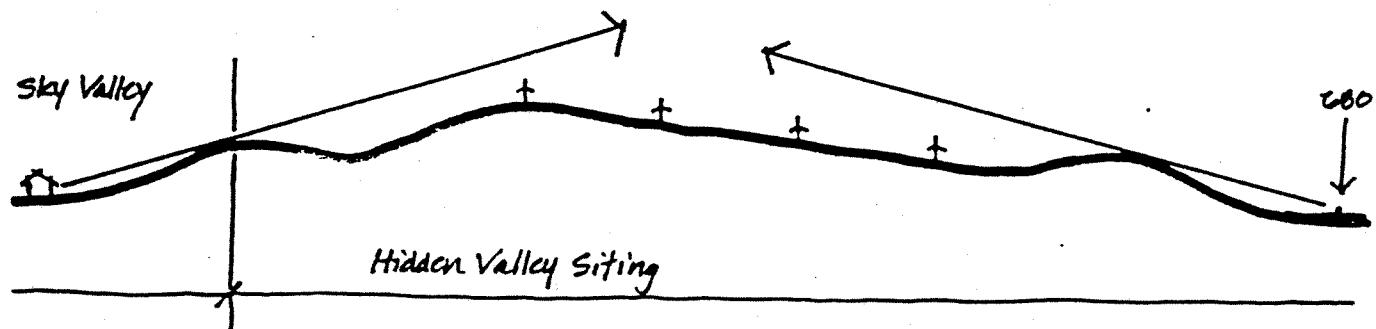
- 4.a. Santa Clara will present its plan for the windfarm project (the "development plan") to the Group and the Group Citizens Advisory Committee for review, consultation and comment at the following steps:
 - (1) Santa Clara will present and discuss with the Group and the Group Citizens Advisory Committee, a description of the windfarm project and the alternatives to the project which the environmental consultants propose to address;
 - (2) Santa Clara will present and discuss with the Group and the Group Citizens Advisory Committee the Administrative Draft EIR prior to circulation of the Draft EIR to the general public;
 - (3) Santa Clara will meet with the Group and the Group Citizens Advisory Committee to receive their comments on the Draft EIR prior to finalizing the EIR.
- 4.b. The development plan will include, at a minimum, a comprehensive assessment of environmental and planning opportunities and constraints, alternative wind energy development plans, planning the project's visual impacts, wildlife and habitat preservation alternatives, geotechnical impacts, and recreation compatibility. [Visual impacts, wildlife and habitat preservation, geotechnical impacts, and recreation compatibility are more specifically described in the first set of subparagraphs 1 - 4, Section 3.3.2.]
5. Santa Clara will request timely comments from the Group and the Group Citizens Advisory Committee.
6. Santa Clara will give due consideration to such comments prior to certifying the EIR and approving the windfarm project.
7. Opportunities for public access and open space preservation will be provided throughout the development plan. The windfarm project will include when appropriate and feasible: public access easements for recreational trail use and access to public recreational areas, fee title dedication (as appropriate) to public ownership of designated public recreation areas, conservation easements for livestock grazing and scenic resource buffers, capital improvement dedications of trails, trailheads and park access roads, and establishment of staging areas and interpretive displays.



Primary and Secondary Visual Impact Areas



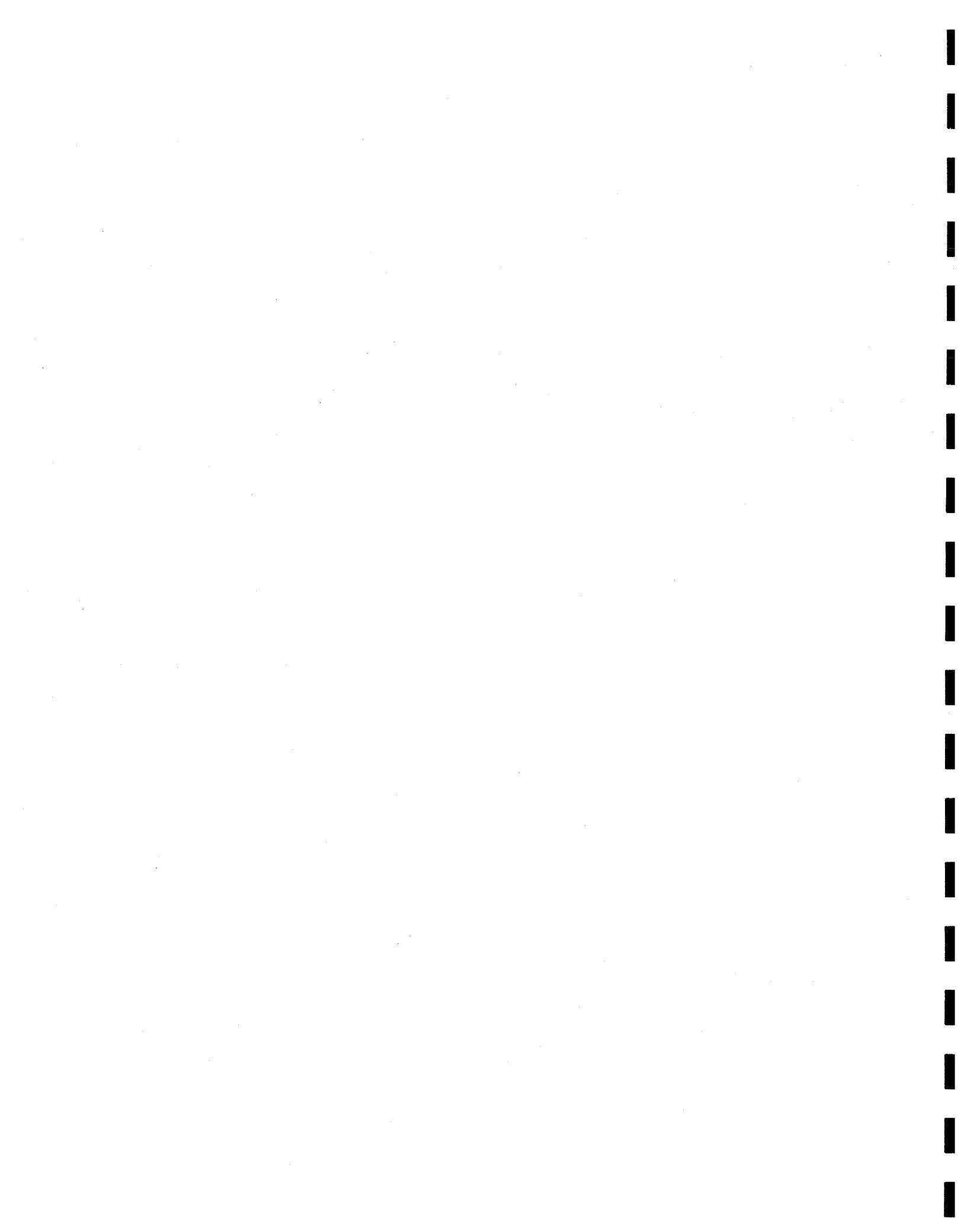
Siting Along Interior Ridgeline



Hidden Valley Siting

WIND TURBINE SITING APPROACHES

Figure 5



3.4 MINERAL RESOURCES EXTRACTION OBJECTIVE. Recognize the potential for the managed production of mineral resources within the Cooperative Planning Area by establishing reasonable limits on the extent of mineral extraction activity consistent with State law, and planning for recreational uses in a manner that limits the potential for conflict between such uses and mineral development activities.

Mineral resources extraction occurs in Solano County and in the Cooperative Planning Area. Within the Cooperative Planning area, an "aggregate mineral resource area" has been identified for informational purposes only¹. However, mineral extraction activities could potentially occur anywhere within the Cooperative Planning area subject to first securing a use permit from Solano County. The following policy guidelines provide for the managed extraction of mineral resources, should it occur within the Cooperative Planning Area. These policy guidelines, along with mineral resource mapping shall be reviewed upon update of the mineral resource provisions of the Solano County General Plan.

3.4.1 Mineral Resource Mapping. State-designated mineral resources of statewide or regional significance, (e.g., resources in the Sulphur Springs Mountain area) shall be identified and located in all Cooperative Planning Area planning documents. (See Figures 2, 3 and 6). Mineral resources which may be identified and mapped as part of the update to the mineral resource provision of the Solano County General Plan shall be identified and located in all Cooperative Planning Area planning documents. Mineral resource deposits within the Cooperative Planning Area shall be considered in the environmental review process for specific projects (e.g., trail and recreational use siting).

3.4.2 Mineral Resources Extraction Policy. Mineral resource extraction activities shall be compatible with open space uses and shall be subject to the approval of a conditional use permit from the agency having jurisdiction of the property and with the approval of the reclamation plan pursuant to SMARA.

3.4.3 Recreational Use Siting Policy. Active recreational uses including, but not limited to, trails, staging areas, viewpoints or recreation areas, shall be sited in a manner that limits the potential for conflict with permitted mining activities, mining equipment, or mining haul routes. No active recreational use shall be located within 500 feet of a permitted mineral extraction boundary or in a manner that would create a potential safety risk to open space visitors.

3.4.4 Mineral Extraction Approach. Mineral extraction within the Cooperative Planning Area shall be accomplished by state-of-the-art quarrying

¹Designation based on "Seismic Refraction Survey, Catraio Ranch Property, Cordelia, California by NORCAL Geophysical Consultants, Inc., November 21, 1990

methods that will be compatible with surrounding land uses. The use of earthen berms, trees and other landscaping shall conceal a significant portion of the mining activities from view except for those roads necessary to haul quarry materials from the site.

3.5 OPEN SPACE RESOURCES PRESERVATION AND CONSERVATION OBJECTIVE. Preserve, conserve and enhance lands with special open space value for wildlife habitat, natural and visual resources, cultural identity and public safety.

The terrain, vegetation, wildlife, historical and cultural features of the Cooperative Planning Area form the basis for the mutual desire to preserve the area as permanent open space. The policy guidelines below provide for the protection, enhancement, utilization, and management of these resources.

3.5.1 Wildlife Habitat Policy. All sensitive wildlife habitats and corridors of local and/or regional importance should be protected from public access. Primary among the criteria defining sensitive wildlife habitats and corridors of local and/or regional importance are those habitats and corridors which contain or show evidence of plant or animal species considered to be of special regional or local concern. Plant species considered to be of special regional or local concern are those protected under the following:

- plants listed or proposed for listing as threatened or endangered, or plants that are Category 1 or 2 candidates for possible future listing as threatened or endangered, under the federal Endangered Species Act and various notices in the Federal Register.
- plants listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act.
- plants listed under the California Native Plant Protection Act.
- plants that meet the definition of rare or endangered under CEQA.
- plants listed as rare, threatened, or endangered by the California Native Plant Society (CNPS) as shown in Smith & Berg, lists 1b and 2, 1988.
- plants listed by CNPS as plants about which more information is needed to determine their status and plants of limited distribution (Smith & Berg, lists 1b and 2, 1988), which may be included as special status species on the basis of local significance or recent biological information.
- plants listed as sensitive by the local U.S. Forest Service region

or U.S. Bureau of Land Management resource area.

Animal species considered to be of local or regional concern include:

- animals listed or proposed for listing as threatened or endangered, or animals that are Category 1 or 2 candidates for possible future listing, under the federal Endangered Species Act and various notices in the Federal Register.
- animals that meet the definitions of rare or endangered under CEQA.
- animals listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act.
- animal species of special concern to the California Department of Fish and Game (Remsen 1978 [birds] and Williams 1986 [mammals]).
- animals fully protected under the California Fish and Game Code.
- animals listed as sensitive by the local U.S. Forest Service region or U.S. Bureau of Land Management resource area.

Projects and/or facilities established pursuant to this Plan should be sited so as to avoid such sensitive habitat. Users of Cooperative Planning Area public facilities should be barred from such sensitive habitat through an appropriate combination of regulatory requirements and physical barriers. Fences proposed as a part of Plan implementation shall be designed or located so as not to obstruct significant wildlife corridors as identified by future project-specific environmental analysis. Domestic dogs shall be leashed in compliance with existing leash laws when in the Cooperative Planning Area. Clustered development shall be sited so as to avoid important wildlife corridors.

3.5.2 Environmentally Sensitive Areas Policy. Riparian habitats and areas with rare or endangered plant and/or animal species should be designated as "preserved areas" and protected from public access.

3.5.3 Water Resources Policy. Stream corridors, springs, seeps, ponds, lakes and reservoirs should be protected by a 150' buffer zone within which public recreational trails and facilities are permitted.

3.5.4 Significant Vegetation Policy. Large existing trees and significant stands of smaller trees should be preserved.

3.5.5 Prominent Viewsheds Policy. Views into the Cooperative Planning Area from surrounding designated scenic roadways and views out of the Cooperative Planning Area from trail view points should be preserved and enhanced.

3.5.6 Revegetation Policy. Revegetation should occur in disturbed areas, areas requiring soil and slope stabilization, and areas proposed for recreational uses. Plant species used should be native to the area. All such revegetation should be composed to the greatest extent possible of native, xeric, and fire-resistant species.

3.5.7 Archaeological Sites Policy. The archaeological resources of the Cooperative Planning Area should be protected, further studied, and where appropriate, incorporated into the cultural history program of the park.

3.5.8 Historical Sites Policy. The historical and cultural resources of the Cooperative Planning Area should be protected, further studied, and incorporated into the cultural history program of the park.

3.5.9 Erosion Control Policy. A healthy cover of natural vegetation should be maintained to minimize soil erosion. Drainage facilities should be used where necessary to control the quantity of runoff.

3.5.10 Fault Zone Policy. No habitable structures should be built within 50 feet of identified traces of the Green Valley fault.

3.5.11 Noise Exposure Policy. Proposed land uses or facilities within the Cooperative Planning Area shall be designed such that exposure of people to noise levels exceeding applicable thresholds as identified in the Initial Study of Environmental Impact prepared for the Tri-City and County Cooperative Plan for Agriculture and Open Space Preservation will not occur.

3.5.12 - Light and Glare Policy. Increases in ambient light and glare resulting from lighting for active recreation uses or streetlighting for clustered housing shall be reduced by ensuring that all such developments are screened from off-site views by appropriate siting within view shadows, by appropriate landscaping, by selection of appropriate low level lighting fixtures, and by ensuring that all lighting facilities are designed to conform to the rural character of the Cooperative Planning Area and to all current lighting standards of the Cities and County.

4.0 Regional Park and Recreation Objectives and Policies

Introduction

The 10,000-acre Cooperative Planning Area contains six areas identified for potential recreational use development, which if completely developed, would total approximately 960 acres. These areas include:

- A. Lynch Canyon - 125 acres
- B. Creekside - 20 acres
- C. King Ranch - 50 acres
- D. Lopes Road Valley - 440 acres
- E. Paddy Creek Valley - 110 acres
- F. McIntyre Ranch/Orchard - 215 acres

These sites were originally identified in the Phase II Study based on the following criteria: 1) easily accessible to the residents of Solano County and the Cities of Benicia, Fairfield and Vallejo from existing and planned roads; 2) contains terrain less than 30% slope which could accommodate recreational activities; 3) contains natural and cultural features such as creeks, lakes, reservoirs, riparian habitat, oak woodlands, rock outcroppings, and ranch structures; and 4) provides a sense of remoteness from surrounding developed areas.

Recreation Capability and Suitability

In this planning phase, these sites were analyzed to assess their general environmental capability for parkland development and suitability for various recreational activities as illustrated in the Environmental Suitability Evaluation located in the Appendix. Terrain factors, which included slope and landslide areas, and vegetation factors, which included vegetation type (grassland, oak woodland and riparian woodland) were appraised in this analysis. These two factors were correlated together in a matrix and rated for degree of appropriate potential development, 1-Intensive, 2-Moderate, 3-Selective, 4-Minimal, and 5-Restricted. Areas rated 1 or 2 were determined to be most suitable for recreation development. Areas rated 3 could also be developed depending on the stability of individual slide areas. Areas rated 4 generally would only be developed for trails, and areas rated 5 would not be developed because of the steepness of the slope.

Additional analysis of environmental conditions and potential environmental impacts in each of these areas will be required prior to development of any recreation facilities. Recreation areas may be operated by the Group, other public agencies, or private parties. Consistent with Policy 3.1.9 of this Plan, no publicly operated recreation area will be acquired or developed without the consent of the landowner.

The types of recreation activities envisioned for these areas would generally be passive in nature - picnicking, camping, nature interpretation and trail use. Active developed recreation, such as sports fields or a golf course/driving range could possibly be located in areas with appropriate terrain and access capabilities.

Regional Trail System

A 35-mile system of primary trails has been tentatively identified that would connect the six potential recreation areas to existing or planned trail systems and recreation areas outside of the Cooperative Planning Area. The trail system would connect Lynch Canyon to Lake Herman Recreation Area via a 10-mile north-south ridge trail corridor; Blue Rock Springs Park to the Lopes Road Valley Recreation Area via a 6-mile east-west trail corridor; and provide a 19-mile long loop trail corridor along the perimeter of the area. Most of the trails would utilize existing unpaved roads or fire roads, and would be located to avoid conflicts with cattle ranching operations. Trails would be multi-use and accessible to the disabled wherever it is feasible, accommodating hikers, equestrians and mountain bikers. Staging areas or trailheads would be located at areas with vehicular access or planned vehicular access.

Analysis of environmental conditions and potential environmental impacts along potential trail corridors will be required prior to trails development. Consistent with Policy 3.1.9 of this Plan, no trails will be developed without the consent of the landowner.

4.1 REGIONAL PARK AND RECREATION OBJECTIVE. Provide for the present and future needs for compatible regional outdoor recreational opportunities in the County through continued recreation planning for the Cooperative Planning Area.

4.2 RECREATIONAL USE POLICIES

4.2.1 Recreational Use Diversity and Permitted Activities Policy. The Cooperative Planning Area should contain a diversity of outdoor experiences which provide active and passive recreational opportunities, and the chance to learn about and enjoy nature. Where consistent with the other policies in this Plan and compatible with the affected environment, development of the following range of recreational use opportunities should be considered within the Cooperative Planning Area:

Picnic: Walk-in, Family/Small Group, Medium Group (25-100), Large Group (100+)

Group Assembly: Amphitheater, Meetings & Classes, Special Events, Day Camp, Interpretive Center, Conference Center, Field Sports & Events

Overnight Uses: Walk-in Camping/Family, Walk-in Camping/Group, Car Camping-Tents, Car Camping-RV's, Group Camping, Equestrian Camping

Trail Uses: Hiking, Backpacking, Interpretive Trail, Mountain Bikes, Equestrian, Special Events/Races

Other Uses: Animal Petting Farm, Equestrian Camp, Working Ranch, Trap Shooting, Archery Range, Swim Facility, Fishing, Golf Course

Supporting Activities: Equestrian Rental, Bicycle Rental, Food Concession, Administrative Offices, Maintenance Area, Ranger Residence, Entry/Access Control

4.2.2 Recreational Use Capacity Policy. The range in the number of users the park should accommodate can be established based on identification of environmental capabilities and planned recreational mix of activities. The amount of developed recreational use areas to natural parkland areas should be targeted at a ratio not to exceed 1:10 to insure the preservation of the natural rural character. This planning ratio and user capacities in each of the recreation areas should be re-evaluated during future planning phases. Final user capacities should be established based on physical land and environmental

capabilities, vehicular access and parking needs for the selected activities program, hiking access and staging needs. The park capacity program should be developed in future planning phases to achieve a range of usage comparable to that of the parks of the East Bay Regional Park District system.

4.2.3 Regional Park Recreation and Trails Policy Map. The Concept Plan shown on the Regional Park Recreation and Trails Policy Map (refer to Figure 6) designates the park recreation areas and trail corridors provided by the policies and guidelines of this chapter.

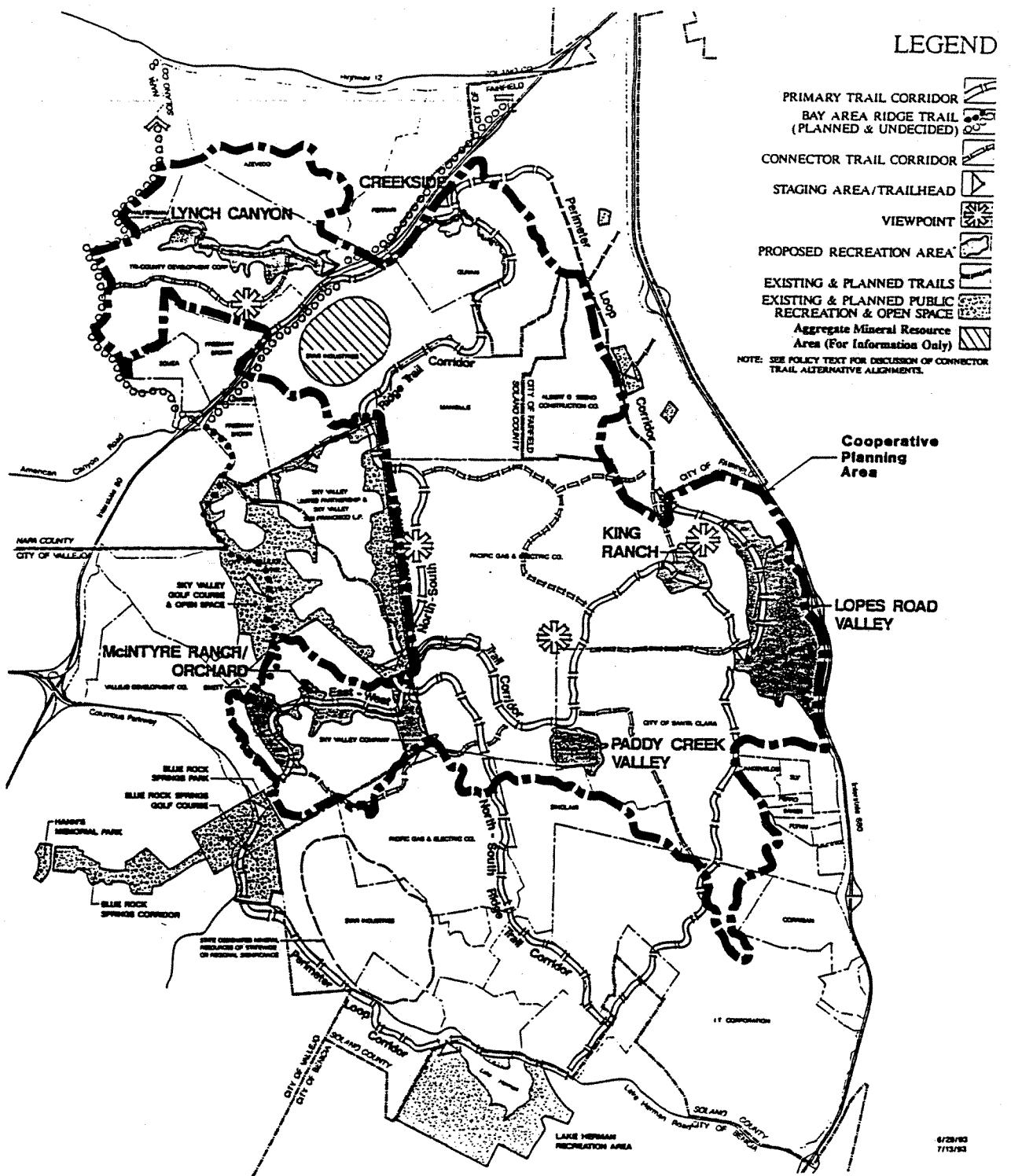
Discussion: Regional recreational uses should be developed in six recreation areas in a manner which avoids significant adverse environmental impacts. Active and passive recreational activities shall be allocated to these areas in future phases of the planning program (A Recreation Activities and Facilities Table showing potential activities and facilities for each recreation area is shown in the Appendix).

4.2.4 Trail Recreation Facilities Development. A multi-use non-motorized trail system will be established within the Park connecting to other trail systems, parks and recreation areas outside the Cooperative Planning Area as designated in the Regional Park Recreation and Trails Policy Map and as provided for in detailed regional trail policies in Section 4.4.

4.2.5 Recreational Use Facilities Development. A phased program of recreational use area development will be followed which responds to recreation demand in accordance with available capital facilities funding and the availability of supporting infrastructure facilities. A phased development program is provided in the Implementation Section 5.0.

4.2.6 Supporting Use Facilities Development. Major recreation areas should be developed only as consistent with the availability of any necessary offsite infrastructure.

4.2.7 Property Owners Rights Policy. Property owners' rights shall be respected during the process of recreation area acquisition and development. Public access will be allowed only with the consent of the property owner. Public recreation areas owned or operated by private parties are not inconsistent with this Plan.



REGIONAL PARK RECREATION & TRAILS POLICY MAP

Tri City and County
Cooperative Plan For
Agriculture and Open Space



Prepared for:
THE TRI-CITY & COUNTY
REGIONAL PARK AND
OPEN SPACE GROUP

Solano County
Cities of Benicia,
Fairfield & Vallejo

Figure 6

4.3 RECREATION AREA GUIDELINES

Each recreation area is unique and presents potential users with a wide range of possible recreational experiences. A recreation area guideline, a description of the area, and its possibilities for recreational use are described below.

Lynch Canyon

4.3.1 Lynch Canyon Recreation Guideline. The recreational uses for Lynch Canyon could include family and small group picnicking, natural area study and interpretive displays, equestrian and pedestrian trail use, and ranger residence.

Recreation Area Description. Located west of Interstate 80, Lynch Canyon is separated from the rest of the Cooperative Planning Area by the freeway. It is highly accessible from I-80 via the Red Top Road or American Canyon Road exits and McGary Road. Lynch Road crosses under the freeway and ends at a cul-de-sac where a gated, unpaved private road leads to Lynch Canyon. This recreation area was initially identified in the Phase II Study as the northernmost valley of two valleys in the area. However, due to the presence of a lake, this valley is used year-round for cattle operations. The landowners also plan to continue their ranching operation in the future.

Because ranching is an important, established open space use and a vital element in the vegetation management component of the open space preservation aspect of the Plan, the designated recreational use area was shifted to the southern valley. This valley possesses many of the same characteristics as the northern valley, except for the presence of year-round water. An intermittent spring-fed stream lined with riparian vegetation consisting of willows, Interior Live Oaks, California Bays and blackberries, winds through the valley. Steep, grass-covered hills that rise to elevations over 800 feet surround the valley. Spectacular panoramic views are afforded from the ridges. A few windsculpted oaks are scattered along drainages and up on the ridgelines amidst rock outcroppings.

As wildlife habitat, Lynch Canyon is a wintering and nesting habitat for several species of hawks and golden eagles. The canyon's relative isolation, ridgeline trees, riparian areas for roosting, grassland habitat, proximity to Suisun Marsh for foraging, and winds that facilitate foraging activity make this area attractive to raptors (Final EIR, Lynch Canyon Class II-1 Sanitary Landfill, EarthMetrics, 1984).

A ranch house and a few out buildings are located along the dirt road at the intersection of the two valleys. A family farmstead dating back to the 1870s is located near the west end of the valley. Structural remains and associated cultural debris, such as ceramic fragments, bottle glass, buttons, etc. can be found there (EarthMetrics, 1984).

Recreational Use Description. Lynch Canyon encompasses about 125 acres suitable for recreational uses. The stream corridor, surrounding ridgelines and existing ranch roads provide the framework for a loop trail system that takes trail users through a variety of landforms and vegetation types, and provides both short-range and distant panoramic views. A portion of the trail could be incorporated into the Bay Area Ridge Trail system. A staging area could be located at the ranch house area with parking available for hikers and horse trailers and restroom facilities, probably chemical toilets. Picnicking for small groups could occur along the riparian corridor where trees provide shade, and along the trails where a few tables could be placed at scenic outlooks. Informal picnicking would also be appropriate at rock outcroppings. Because Lynch Canyon has been identified as a wintering and nesting habitat for raptors (EarthMetrics, 1984), the effect of the presence of humans picnicking and using nearby trails needs to be determined before allowing such uses. Other amenities could include signage and possible interpretive displays. Because grazing would continue on the lands adjoining the designated recreation area, the trail and the picnic areas would be fenced and signage posted to discourage trail users from entering grazing areas.

Creekside

4.3.2 Creekside Recreation Guideline. The recreational uses for Creekside could include family and small group picnicking, trail use, trap shooting, fishing and equestrian rental.

Recreation Area Description. In the Phase II Study, an area encompassing over 400 acres was identified for recreational use. However, subsequent environmental suitability analysis revealed that a majority of the site had landslides which do not preclude development for recreation, but would add an additional cost for slide repair. Other factors, such as exposure to the wind, and lack of trees, except along the riparian corridors, made the larger area less attractive for recreational activities.

Recreation use in this area is appropriate near the creeks which run along the west side of McGary Road from Lynch Road downstream for approximately 1.5 miles, and along the northeast boundary of the Guyan property. Both creek corridors are densely vegetated with riparian trees and willows.

The area is accessed from McGary Road, approximately 4000' west of the Red

Top Road exit via a private unpaved road through the adjacent property to the west. A wooden bridge provides access over the creek. Current use of the property is cattle grazing. The creek along McGary Road provides water for cattle all year. As discussed below, the landowners are considering development of a trap shooting course.

Recreational Use Description. Recreation use along the creek adjacent to McGary Road could be concentrated on flatter portions of the creek bank. Uses would be limited to family or small group uses. The property owners have plans to develop a clay pigeon trap shooting course in the wooded riparian canyon along the northeast edge of the property. The proposed 1/2-mile sporting clay trail would follow an existing dirt road. Other site improvements would include a mobile home to provide office space, restrooms, and living quarters for a caretaker, leach field and 24-space gravel parking lot with landscaping. The existing bridge over the creek would be renovated with new planking and metal railings. Picnic tables may be installed near the parking lot. This area would serve as the staging area for the sporting clay trail users.

It may be possible to combine the use of this staging area to include use by regional park trail users. The feasibility of expanding the proposed parking lot or adding additional parking nearby needs to be explored. This site could serve as the trail access point to the Perimeter Loop Trail along the creek and to the Ridge Trail. The trail along the creek would need to be on the west side of the creek, i.e. between McGary Road and the creek, to allow cattle access to the water from the east side; this location may be infeasible, however, due to steep slopes on the west side of the creek. A portion of the proposed Ridge Trail would run adjacent to the proposed sporting clay pigeon course, a lateral distance of approximately 800' and vertical distance of approximately 200' above the facility. Whether or not these distances are safe, and the impact of shotgun noise on trail users needs to be determined.

King Ranch

4.3.3 King Ranch Recreation Guideline. The recreational uses for King Ranch could include picnicking for groups up to 100 people, camping, trail use, interpretive center and/or amphitheater, and interpretive displays.

Recreation Area Description. The 50-acre King Ranch area, located just south of and above Cordelia Village, is a grass-covered valley surrounded by hills which reach elevations over 600 feet. Access to the area from Lopes Road is via an unpaved private road which winds around the north side of the prominent hill and up the east side to the valley. A 1-acre reservoir sits in the center of the valley surrounded by grassland. The area lacks trees except for a few north of the reservoir, and along a drainage corridor at the southern end of the valley. Currently, the land is used for cattle grazing. Plans for the

property, owned by PG&E, are to develop wind energy.

Recreational Use Description. The proximity of this area to Cordelia Village and I-680 combined with its sense of remoteness due to its location behind the hills makes this an attractive area for recreational use. The reservoir and drainage corridor are natural features that add to the uniqueness of this site. The area is quite exposed, and the lack of trees could be a drawback to developing the area for recreation. The activities that would be appropriate for this area if lack of trees is not a problem are picnicking, camping, interpretive center, and trail use. The area around the reservoir could be improved by planting drought-tolerant turf to create a large grassy area for picnicking. Groves of trees could also be planted to provide shade in the picnic areas. If the area were developed for camping, additional trees would be needed. They could be planted a few years prior to development of the campground to allow time to mature.

An interpretive center that explains the role of the Cooperative Planning Area for Agriculture and Open Space, supporting open space uses, such as ranching and wind energy generation, and the ecology of the area could also be located here.

Lopes Road Valley

4.3.4 Lopes Road Valley Recreation Guideline. The recreational uses for the Lopes Road Valley Recreation Area have the potential to serve regional active recreation uses, as well as day use picnic and overnight camping uses. These could include such active use recreation activities as a multi-use sport complex with softball, baseball and soccer fields, batting cages, and food concessions, family to large group (100+) picnic facilities, a golf course and driving range, administrative offices, and maintenance area. These active sports facilities could be commercial operations capable of providing positive park revenues.

Recreation Area Description. This 440-acre recreation area lies on the eastern side of the Cooperative Planning Area adjacent to Lopes Road. The flat, grass-covered land is bounded to the north, west and south by hills rising to over 600 feet, and to the east by Lopes Road. The area is practically devoid of trees, except a few around a caretaker's residences. Two intermittent streams cross the site and drain to the marsh east of the freeway. An I-680 interchange is located within the site. Access to the site is currently from an unpaved private road off of Lopes Road, approximately 2,300 feet south of the interchange.

The site, owned by the City of Santa Clara, is currently used for cattle ranching from October to May. A large barn on the property is leased for feed storage

and distribution, and a caretaker leases the residences. The City originally purchased the land for wind energy development, but this flat portion was eliminated as an area for wind turbines. They plan to use the land for possible residential and commercial development. The remainder of their holdings in the hills west of the flat area has plans for wind generation, a pumped hydro facility, ranching, possible quarrying, and possible residential development.

Recreational Use Description. The large flat acreage, high visibility and easy access make this site conducive to more active use recreational uses, such as sports fields, golf course and driving range. The windy conditions of the site may not be appropriate for certain activities, however, fast-growing trees could be strategically and creatively planted to provide more favorable conditions.

Paddy Creek Valley

4.3.5 Paddy Creek Valley Recreation Guideline. The recreational uses for Paddy Creek Valley could include family and small group picnicking, walk-in camping, and trail use.

Recreation Area Description. This 110-acre recreation area, currently used for cattle ranching, is surrounded by grass-covered hills with a few trees rising 800-1,100 feet in elevation. A one-acre reservoir used by cattle, is located in the center of the site. Paddy Creek, which flows intermittently, originates in the hills to the east. Unlike the other recreation areas, Paddy Creek Valley is currently not accessible from existing public paved roads. From Lake Herman Road, Sky Valley Road is paved for 1.2 miles, then is a private unpaved road for 1.8 miles to the proposed recreation area. The landowner is considering residential development for this area.

The area immediately to the south of Paddy Creek Valley is the proposed 4,962-acre residential community of Sky Valley Benicia. A Specific Plan and EIR for the project area was initiated in 1991, and submitted to the City of Benicia in April of 1992 for public review. Currently, the project has been placed on hold by the City for at least two years. If the Specific Plan is approved, the recreation area could be accessible from the development via an emergency access road.

Recreational Use Description. The relative isolation of this area from existing residential development makes Paddy Creek Valley a suitable getaway location for picnicking and camping. Paddy Creek Valley should be planned as a low-user intensity hike-in/ride-in recreation area for hikers and equestrians. Appropriate fast-growing trees would need to be planted to provide shade.

McIntyre Ranch/Orchard

4.3.6 McIntyre Ranch/Orchard Recreation Guideline. The recreational uses for McIntyre Ranch/Orchard could include family to large group (100+) picnicking, interpretive center, conference center, day camp, amphitheater, overnight camping, trail use, animal petting farm, equestrian rental, administrative offices, maintenance area, food concession, and ranger residence.

Recreation Area Description. This 220-acre recreation area features McIntyre Ranch, a 23-acre property acquired by GVRD in 1986, and a 70-acre walnut orchard valley ("Orchard") situated at the southern boundary of Sky Valley Vallejo. The two areas are linked by a grassland valley used for cattle grazing. Two reservoirs provide water for the cattle and an intermittent western tributary of Sulphur Springs Creek flows through the valley. Steep grass-covered hills rising over 700 feet to the west and north, and over 800 feet to the east and south surround the valleys. A riparian canyon with an eastern tributary of Sulphur Springs Creek lies east of the Orchard. Cattle are generally brought into the area from the east along the roads bordering the tributaries. Cattle also enter the area from the corral at the southern end of the Orchard. McIntyre Ranch is accessed via Columbus Parkway and St. John's Mine Road, and the Orchard area is accessed from Sky Valley Vallejo via an unpaved road off Halcyon Drive.

McIntyre Ranch contains two residences - a main house in fairly good condition and used occasionally by GVRD staff for meetings, and a second house which needs major structural repair and is not worth saving. There is a swimming pool in need of maintenance with outdoor barbecue facilities adjacent to the main house. The property also possesses equestrian facilities which are currently used for boarding horses.

The Orchard site possesses an active English and black walnut orchard which covers approximately 20 acres of the valley floor. Sulphur Springs Creek, which runs north to south along the west side of the orchard, contains significant riparian vegetation consisting of willow, bay trees, and Coast Live Oak. A man-made stilling pond located at the northern end of the orchard collects runoff from the Sky Valley development and gradually releases it into Sulphur Springs Creek. Wetland vegetation surrounds the pond.

The current Sky Valley Specific Plan designation for the Orchard site is Open Space and School/Park Site. The property owner has submitted a Specific Plan amendment to the City of Vallejo to enable him to develop single-family residences on the southern half of the site and an elementary school/park on the northern half. The Draft Supplement to the Environmental Impact Report for the project has been submitted to the City of Vallejo for public review.

Recreational Use Description. The McIntyre Ranch/Orchard area has the

potential to provide the greatest range of recreational opportunities due to the variety of existing facilities, terrain and vegetation areas. The activities would generally be passive in nature, including use of McIntyre Ranch for small-scale conferences, meetings, day camps, special events, equestrian and hiking staging area, picnicking, nature study, animal petting farm, or established as a working ranch to teach children about cattle and ranching. The School site contemplated by the Sky Valley Specific Plan would be consistent with these uses.

The numerous trees within the Orchard area provide an ideal location for walk-in camping and picnicking. Sulphur Springs Creek and its tributaries provide a scenic trail corridor through the heart of the Cooperative Planning Area. Since the valley between McIntyre Ranch and Orchard is an important area for cattle operations, recreational use within this area should be minimized. See East-West Connector Alternatives discussion under 4.4.3 below.

4.4 REGIONAL TRAILS GUIDELINES

The Regional Trail System

A multi-use regional trail system is generally designated on the Trail and Recreation Concept Plan Map. The trails would provide a variety of non-motorized trail opportunities and experiences for all park users, including walkers, hikers, equestrians and mountain bikers. Trails would link designated recreation areas and connect to other existing and planned trails outside the Cooperative Planning Area. Ultimately the trail system would permit regional access from many different trailhead locations along the perimeter of the regional trail system and would afford trail users a variety of trail opportunities including half day and full day excursions.

In establishing the regional trail system, specific guidelines shall be developed to determine criteria to be used in siting pedestrian, bicycle, equestrian and multi-use trails wherever feasible.

The specific alignment of individual trails would be developed over many years and would require establishment of individual trail links by coordinating trail alignments with the operational needs of local landowners and cattle grazing lease arrangements. The Plan shows the established corridors along which trails are desirable, as well as trail segments which are compatible with the plan and acceptable to local property owners. In many instances alternative alignments are identified in an interim basis which would require further project planning. In particular, trails are intended to be located along fenced ranch property lines, on ridge lines, or in specific alignments where there is agreement that these will not impact or unduly disrupt cattle operations. The following guidelines are set forth to identify specific trail corridors and alternative connector trail alignments to be considered in further planning.

4.4.1 Perimeter Loop Trail Corridor and Alternatives Guideline. A Perimeter Loop Trail Corridor designated on the Trail and Concept Plan Map, which generally follows the perimeter of the park and connects to Lake Herman on the south and to Lynch Canyon on the north, shall be established. Existing trails and other planned trails, such as the Bay Area Ridge Trail, shall be incorporated into the Perimeter Loop wherever possible. The route should provide a variety of terrain, habitat and viewing experiences for the trail user.

Perimeter Loop Corridor. Starting at the Creekside Staging Area and travelling clockwise, the Perimeter Loop would follow the creek then connect with the existing and planned paved trail (which would be accessible to the disabled) along the Green Valley fault zone on the west side of Cordelia Village. At the end of the paved segment, the trail would cross the intermittent stream, then progress over the hill to the Lopes Road Valley Recreation Area.

The trail would then follow an existing unpaved road through the Santa Clara property up to the ridgeline. From here, the trail would lead to Paddy Creek and generally follow the creek to the Lake Herman Recreation Area. It would follow Lake Herman Road to Blue Rock Springs Golf Course and Park and tie into the planned Bay Area Ridge Trail route along the crest of Sulphur Springs Mountain to Interstate 80. From here the Perimeter Loop could be located on either side of the freeway back to Creekside Staging Area. A route that borders the creek is preferable; however, the terrain along the western side of the creek may be too narrow and steep to accommodate a trail. An alignment on the north side of the freeway would take the trail outside the boundaries of the Cooperative Planning Area. The ultimate alignment of the trail will require further consideration and resolution in future planning. Total distance of the Perimeter Loop would be approximately 19 miles.

4.4.2 North-South Ridge Trail Corridor and Alternatives Guideline. A trail corridor which links the Lynch Canyon Recreation Area to Lake Herman along the westernmost north-south trending ridgeline shall be established. The trail should use existing ranch roads and trails where feasible.

North-South Ridge Trail Corridor. Starting at the Lynch Canyon Staging Area, the route would follow the creek northeast (downstream) to the Creekside Recreation Area, then climb to the crest of the ridgeline to the east of American Canyon Creek. The trail corridor would then drop down into the canyon at some point, cross the creek, and generally follow the adjacent property lines to the ridgeline at the northeast corner of Sky Valley Vallejo. The trail would drop down into Sky Valley Vallejo, pass near the golf course, then climb up to the ridge along the east side of the development. At the southern end of Sky Valley Vallejo, the trail would drop down to the McIntyre Ranch/Orchard Recreation Area and cross the eastern tributary of Sulphur Springs Creek, then climb the slope to the ridgeline along the east side of the Orchard area. The trail would continue along the ridge to Lake Herman. The distance of the ridge route would be approximately 10 miles.

Connector Alternative. This trail would connect the Bay Area Ridge Trail at the northwest corner of Sky Valley Vallejo to the North-South Ridge Trail at the northeast corner of Sky Valley Vallejo.

4.4.3 East-West Trail Corridor and Alternatives Guideline. A trail corridor which links Blue Rock Springs Park at the western edge of the Cooperative Planning Area to the McIntyre Ranch/Orchard, Paddy Creek Valley, King Ranch and Lopes Road Valley Recreation Areas shall be established. The trail should use existing ranch roads and trails where feasible.

East-West Trail Corridor. The route for this trail corridor takes advantage of the existing unpaved roads that follow Sulphur Springs Creek's tributaries

for most of its length. From the staging area at Blue Rock Springs Park, the trail would climb Sulphur Springs Mountain then drop down to the McIntyre Ranch/Orchard Recreation Area where it would follow the western tributary of Sulphur Springs Creek to the Orchard, then wind along the eastern tributary of the creek to the Paddy Creek Recreation Area. The route would then generally follow existing unpaved roads north to the King Ranch Recreation Area, then follow the drainage corridor southeast to the Lopes Road Valley Recreation Area. Total distance of the route would be approximately 6 miles.

Connector Alternatives. In response to cattle ranching concerns that the East-West Trail Corridor is also a primary migration route for cattle, this connector alternative attempts to minimize the potential conflict between trail users and cattle by following a route along the ridgelines at the southern boundary of the Cooperative Planning Area rather than the creek's tributaries. The proposed route would still link McIntyre Ranch to the Orchard, then climb east to the ridge and intersect the North-South Ridge Trail. The East-West Corridor could also connect to the Perimeter Loop along the Santa Clara/PG&E property line and/or along the major ridgeline in Santa Clara property.

4.4.4 Bay Area Ridge Trail Guideline. The regional trail system should incorporate existing planned routes of the Bay Area Ridge Trail System.

4.4.5 Connector Trails Guideline. Trails which connect segments of the main trails or recreation areas should be established as conditions allow. Exact routes shall be determined during future phases of the planning process.

4.4.6 Staging Area and Rest Stop Guideline. Major staging areas and trailhead facilities should be established at each of the regional recreation areas to provide efficient utilization of: Lynch Canyon, Creekside, Lopes Road Valley, McIntyre Ranch and Orchard. Each staging area should include a gravel parking lot for autos and horse trailers, restroom facilities, picnic tables, and potable water. A trail rest stop should be provided approximately every two or three miles at locations accessible by park personnel vehicles. Included would be a chemical toilet, drinking water, if possible, bench(es), a hitching post, equestrian water source, and trash receptacle.

4.4.7 Property Owner Rights Policy. Property owners' rights shall be respected during the process of defining trail alignments and acquiring trail rights-of-way. Public access will be allowed only with the consent of the property owner.

4.4.8 Multi-Use Trails and Americans With Disabilities Act (ADA) Compliance Policy. Trails shall be established for pedestrian, bicycle, equestrian and/or multi-use where appropriate. These trails shall be accessible to the disabled wherever feasible.

5.0 Cooperative Plan for Agriculture and Open Space Preservation Implementation Objectives & Policies

The effect of this Plan on the preservation of open space and the establishment of recreational opportunities can only be realized to the degree that the objectives, policies, and guidelines can be consistently implemented. The strategy developed for the systematic implementation of this Plan consists of a combination of regulatory, financing, and administrative actions to be carried out by the Group. This implementation program intends to forge a partnership for joint public and private sector action and will require a continuous and ongoing process of refinements and adaptations to economic opportunities. The purpose of this chapter is to establish a set of implementation policies which address 1) plan administration through inter-jurisdictional planning, implementation, and management, 2) regional park development and open space preservation implementation program, and 3) park operations, maintenance, and public education.

5.1 INTER-JURISDICTIONAL PLANNING, MANAGEMENT AND IMPLEMENTATION OBJECTIVE. Continue inter-jurisdictional cooperation and coordination of joint planning, implementation, and management of the Cooperative Planning Area through the continued operation of the Tri-City and County Cooperative Planning Group.

The following set of policies establishes how the Cooperative Planning Area becomes designated and recognized as a permanent open space area.

5.1.1 Cooperative Planning Area Boundary Policy. The Cooperative Planning Area Boundary designated on the Cooperative Plan for Agriculture and Open Space Preservation Policy Map (refer to Figure 2) delineates the Permanent Open Space Boundary to be designated by the members of the Group. The mutual designation of these lands as permanent open space shall be achieved through joint incorporation of the Cooperative Planning Area Boundary into the respective General Plans of each jurisdiction and by the agreement of the parties to the JPA that Members of the Group shall not allow urban development to encroach into the Cooperative Planning Area Boundary.

5.1.2 The LAFCO Open Space Designation Policy. It is recommended that LAFCO designate the properties within the Cooperative Planning Area as Open Space.

Discussion: Under the LAFCO 1973 Guidelines for establishing spheres of influence in Solano County, provisions were made for further defining the areas for urbanization and open space protection. Within the existing city spheres of influence, LAFCO may designate "Urban Open Space" areas which have "value for parks and recreation purposes, conservation of land and other natural resources, historic or scenic purposes." Annexation of an area designated "Urban Open Space" requires the city to demonstrate to LAFCO how the area is to be protected and maintained by the City and/or other conservation agencies as permanent open space or public use. "Permanent Open Space" areas may also be designated outside city spheres of influence in those areas which are to be maintained in permanent open space and protected from urban development. City spheres of influence would not be extended into these areas.

5.1.3 LAFCO Annexation Policy. The Group should request that LAFCO revise its standards and procedures for annexation and designation of Spheres of Influence to be consistent with the policies of the Tri-City and County Cooperative Plan for Agriculture and Open Space Preservation.

5.1.4 Cooperative Planning Area Continuing Planning Policy. Continuing planning responsibilities of the Group include the preparation of a Draft Comprehensive Master Plan and integrated environmental review, adoption of a final plan including certification of a final EIR, if one is required, and continuing administration of the plan by an annual review and report and program of actions to carry out the objectives, policies, and program of the plan. Amendments to the comprehensive master plan shall be coordinated with the general plan amendment process of the member jurisdictions.

Administrative Actions

The following administrative actions will be required to carry out the objectives and policies set forth in this Plan:

1. **Plan Adoption Steps.** See Chapter 1.0, Section 1.3 Planning Program & Process, Plan Review and Adoption for a description of the review process for adoption of the Plan.
2. **LAFCO Actions.** Policies 5.1.2 and 5.1.3 address the actions required by LAFCO to ensure permanent open space.
3. **Specific Plan/Master Plan Phase Actions.** The Group will initiate the

development of a Specific Plan/Master Plan for the Cooperative Planning Area when funding becomes available.

4. **Continuing Administration.** The Group will seek out funding sources and move forward with the implementation of the Plan as quickly as possible.

5.1.5 Mitigation Monitoring Policy. Prior to approving any land acquisition, facility development, or other project pursuant to this Plan, the approving entity shall prepare and approve a report describing the project's consistency with policies 3.3.3(3)(d) (Wind Turbine Glare), 3.5.1 (Wildlife Habitat), 3.5.6 (Revegetation), 3.5.11 (Noise Exposure), 3.5.12 (Light and Glare), 5.3.9 (Wildlife Habitat Management), 5.3.12 (Emergency Response), 5.3.13 (Transportation Facilities), 5.3.14 (Public Health/Hazardous Substances), 5.3.15 (Public Health/Electromagnetic Fields), and 5.3.16 (Public Health/Wildfires).

5.2 OPEN SPACE PRESERVATION AND REGIONAL PARK DEVELOPMENT AND IMPLEMENTATION OBJECTIVE. Develop a phased program of park facilities development and management structure through preparation of a Comprehensive Master Plan.

The Plan recognizes that the pace of parkland acquisition, development and open space preservation will be contingent upon implementation opportunities, available land, capital funds and other resources, but should proceed in parallel with continuing planning activities based on the policies set forth in this Plan and as opportunities permit. The following set of policies provides for the programming and development of the park facilities during the preparation of the Comprehensive Master Plan.

5.2.1 Regional Park Development Implementation Programming and Phasing Policy. A phased program of park improvements, including utility and visitor facilities, should be based on priorities of available funding, acquisition and development opportunity, primary user need, and public policy requirements. In general, park improvements at each of the designated public recreation areas could be phased as follows:

- | | |
|---------|---|
| Phase 1 | - Lynch Canyon; McIntyre Ranch/Orchard |
| Phase 2 | - Creekside; King Ranch |
| Phase 3 | - Paddy Creek Valley; Lopes Road Valley |

5.2.2 Regional Trail Improvements Phasing Policy. Development of the Regional Trail System shall be implemented when trail easements and/or property is dedicated or acquired, and adequate funding is available.

5.2.3 Revenue Generating Recreation Activities Policy. The following activities and/or facilities could be considered for potential revenue generation to recover the costs of on-going park maintenance and operations, such as:

- Parking/day use fees
- Group picnic reservation fees
- Family camping fees
- Group camping fees
- Golf course and driving range fees
- Sports park facilities

5.2.4 Wind Energy Revenue Policy. Local revenues (such as increased property tax revenues) associated with power generation within the Cooperative Planning Area may be utilized within the Cooperative Planning Area to fund parkland and open space operations and management costs.

Administrative Actions

The following administrative actions will be required to implement the policies set forth in this section:

1. **Specific Plan/Master Plan Improvement Program.** The Group will include a detailed, phased improvement program in the Specific Plan/Master Plan.
2. **Interim Actions.** Opportunities for the implementation of interim improvements at Lynch Canyon, McIntyre Ranch and on the regional trail system should be evaluated on a regular basis and acted on as conditions permit.

5.2.5 Facility Management Policy. Prior to undertaking construction of any improvements (e.g. trails, visitor facilities, staging areas) on lands or interests in land held by the Group, the Group shall designate an entity or entities to be responsible for construction, operation, and maintenance of the improvements and to work with adjoining landowners to avoid any conflicts with adjoining land uses.

5.3 OPEN SPACE AND REGIONAL PARK OPERATIONS, MAINTENANCE AND PUBLIC EDUCATION OBJECTIVE. A program for park operation, maintenance and public education shall be developed. The Comprehensive Master Plan should incorporate standards for efficient park operations and maintenance and should provide guidelines for continual monitoring of park operations.

Park maintenance, operations and education of the public are critical to the provision of safe, quality recreation facilities that fully serve their intended function. The following set of policies provides guidelines for developing efficient programs for these important needs.

5.3.1 Park Administration Policy. To ensure efficient park operations and public safety, the level of park administration and maintenance staff required for plan implementation should be determined and continually updated based on the specific recreation facilities expected to be developed and anticipated park user capacity.

5.3.2 Security/Police Policy. Park security shall be provided by park ranger staff.

5.3.3 Fence Maintenance Program Policy. A system of fencing to facilitate public access and to separate public and private uses shall be developed cooperatively with private property owners, and continually monitored and maintained by park staff and/or authorized volunteers.

5.3.4 Vegetation Control/Fire Management Policy. Parkland should be planned and operated to minimize fire hazard risks consistent with park activities being provided and adjacent land uses. Development of recreation areas should include appropriate fire prevention and containment plans for active/passive public areas. Development of a fire protection plan for interface areas (buffer zones), and development and maintenance of natural-appearing fuelbreaks should be established.

5.3.5 Low Maintenance Design Policy. Design of park elements and amenities should emphasize low-maintenance, low water and energy requirements while providing a quality park experience in keeping with the natural setting of the park.

5.3.6 Maintenance Program Policy. A full maintenance program should be developed and adapted by park staff to meet park needs as they evolve over the years.

5.3.7 Maintenance Area Policy. An area for maintenance staging, in proximity to areas with heavier use is important for efficient park maintenance.

This area should be sized for adequate office space, circulation, and equipment and supplies storage, and located for efficient maintenance while minimizing impact on park aesthetics.

5.3.8 Public Education Policy. An interpretive program which educates park users on the ecology, history and culture of the area shall be developed.

5.3.9 Wildlife Habitat Management Policy. A program for the management of the natural resources should be developed to establish and enhance all sensitive wildlife habitat of local and regional importance, as defined in Policy 3.5.1, and protect all environmentally sensitive areas of local or regional importance.

5.3.10 Liability and Insurance Policy. In connection with development of trails and recreation areas the Group shall assume liability for public access on Cooperative Planning Area lands and shall establish a means of providing liability insurance to the membership.

5.3.11 Voluntary Role Policy. The participation of volunteers in a manner that supplements the work of permanent park staff should be encouraged.

Discussion: Volunteer services, including in-kind donations of materials, may be secured through local community and scout groups for special projects, particularly environmental concerns such as trail development, revegetation and habitat restoration. Volunteer services may also contribute to interpretation and education programs. Such groups as the California Conservation Corps provide free labor for trail development and maintenance, if materials and equipment are provided.

Administrative Actions

The following administrative actions will be required to implement the policies set forth in this section:

1. **Specific Plan/Master Plan Operations/Maintenance Program.** The Group will include a detailed operations and maintenance program in the Specific Plan/Master Plan.
2. **Interim Actions.** Opportunities for interim operations and maintenance at Lynch Canyon, McIntyre Ranch and along regional trails should be evaluated on a regular basis and acted on as conditions permit.

5.3.12 Compatibility with Applicable Emergency Response Plans. Cluster housing should be sited in a manner that is compatible with applicable

emergency response plans and emergency evacuation plans.

5.3.13 Adequacy of Transportation Facilities. Circulation, parking, and alternative transportation facilities incorporated into the future planning of specific projects should adequately provide for any potential level of usage contemplated by the project, and individual jurisdictions' standards for Levels of Service (LOS) shall not be exceeded.

5.3.14 Public Health Policy (IT Panoche). Land use decisions in the Cooperative Planning Area (e.g. development of recreational facilities and/or clustered housing) should take into account conditions at the IT site and the status and effects of future remediation activities at that site. No proposed land uses shall be approved if present or future risks emanating from activities on the IT site on people associated with the proposed land use are in excess of those risks deemed acceptable for human exposure.

5.3.15 Public Health Policy (Electromagnetic Fields). Prudence should be practiced in the selection of sites for future clustered housing so as to obtain the greatest feasible distance between home sites and the sources of EMFs.

5.3.16 Public Health Policy (Wildfires). Prudence should be used in the siting of any proposed clustered housing to avoid siting such clustered housing in the probable paths of potential wildfires.

5.3.17 Cost Sharing Policy. To the extent that public access opportunities established by the Group in the Cooperative Planning Area contribute to increased costs to the County or other public agencies for fire protection, law enforcement, or other public services, the Group shall enter an equitable cost sharing arrangement with the County or other public entity.

6.0 Appendices

6.1 REFERENCES

1. **Zoning Regulations**, Solano County Dept. of Environmental Management, Compiled from Ch. 28 of the Code of Solano Co., 1992.
2. **Health and Safety Element, Seismic Safety, Safety, Noise**, A Part of the Solano County General Plan, Sedway/Cooke, 1977.
3. **Solano County Land Use and Circulation Element**, A Part of the Solano County General Plan, Solano Co. Planning Dept., 12/89-9/91.
4. **Solano County Park and Recreation Element**, a Part of the Solano County General Plan, Solano Co. Planning Dept., 1983.

Solano County Park and Recreation Map, Solano Co. Planning Dept., 1983.

5. **Resource Conservation & Open Space Plan (Phase 2)**, Solano County, California, a Part of the Environmental Resources Management Element of the Solano Co. General Plan, 1973, amended 1981.

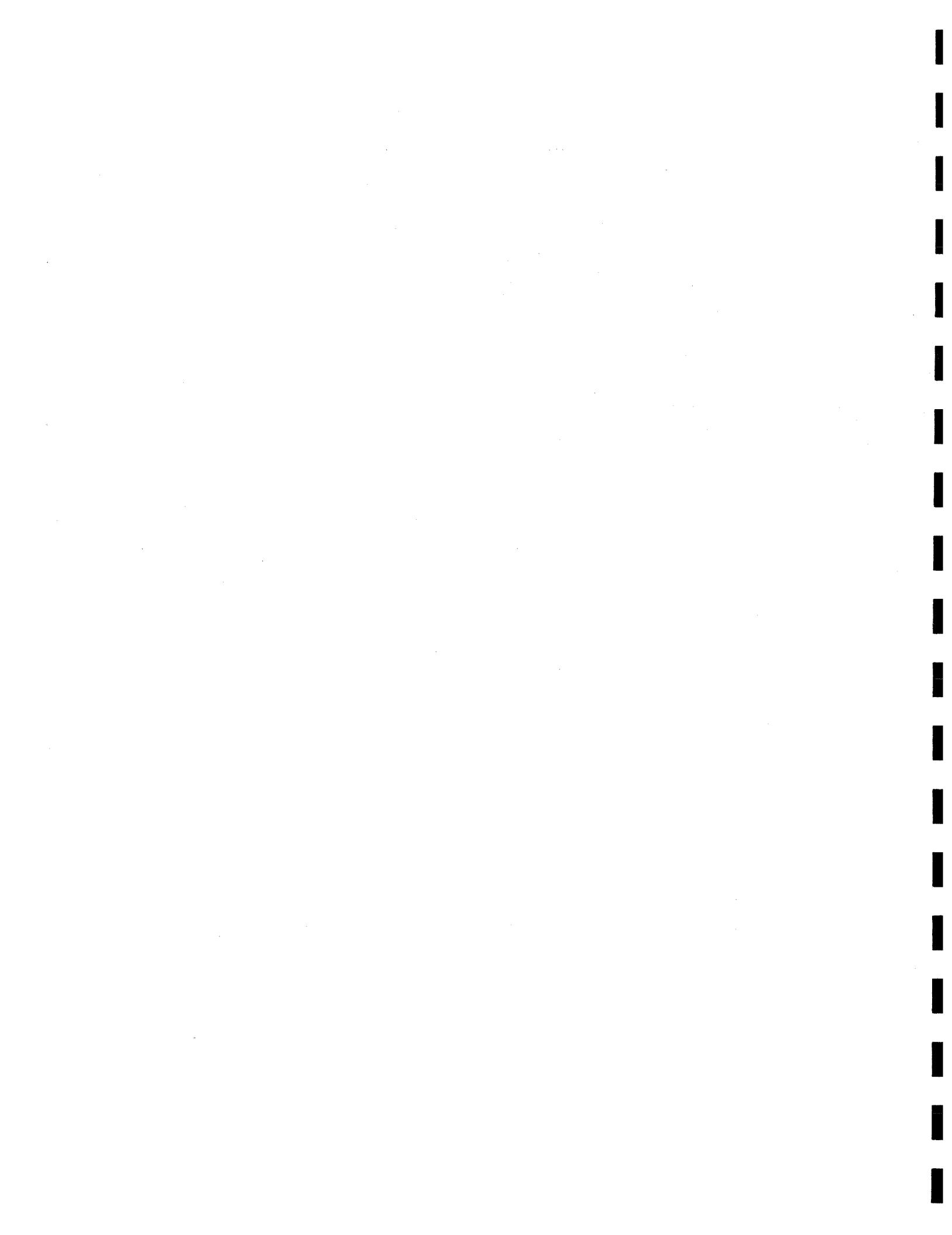
Resource Conservation & Open Space Plan Diagram 'A' (Phase 2), Grunwald Crawford Assoc.

Resource Conservation & Open Space Plan Diagram 'B' (Phase 2), Grunwald Crawford Asso.

6. **Final EIR for the Lynch Canyon Class II-1 Sanitary Landfill**, Earth Metrics Inc., 1984.
7. **Draft EIR for the Lynch Canyon Class II-1 Sanitary Landfill**, Earth Metrics Inc., 1983.
8. **Landslide Hazards in the Benicia-Vallejo Area, Solano County, CA**, Landslide Hazard Identification Map No. 8, Relative Landslide Susceptibility Map, Landslides and Related Features Map, Geologic Map, Relative Debris-flow Susceptibility Map, Calif. Dept. of Conservation, Division of Mines and Geology, 1987.

9. Landslide Hazards in the Cordelia-Vallejo Area, Landslide Hazard Identification Map No. 13, Relative Landslide Susceptibility Map, Landslides and Related Features Map, Geologic Map, Relative Debris-flow Susceptibility Map, Calif. Dept. of Conservation, Division of Mines and Geology, 1987.
10. Cordelia Hills WTG Project Final EIR, Environmental Science Asso., 1982.
11. Sky Valley Project, Vallejo, Draft EIR, ESA Planning and Environmental Services, 1986.
12. Sky Valley Project, Vallejo, Final EIR, Response to Comments Addendum, ESA Planning and Environmental Services, 1987.
13. Wind Turbine Siting Plan & EIR, Solano County, Wagstaff and Brady, 1987.
14. Cordelia Area Specific Plan, An Element of the City of Fairfield General Plan, Dept. of Environmental Affairs, City of Fairfield, 1986.
15. Solano Wind Energy/Open Space Concept, PG&E, 7/92.
16. Vallejo-Benicia-Fairfield Open Space Planning Study, Brady and Associates, 1/91.
17. DRAFT - Summary: Identifying the Tri-City and County Regional Park and Open Space Management Area, 2M Associates, 8/92.
18. Sky Valley Benicia Specific Plan Public Review Draft, SWA Group, 4/92.
19. Solano Wind Park Concept, PG&E, 11/92.
20. Solano Wind Park Concept Preliminary Visual Analysis, PG&E, 11/92.
21. Draft Supplement to the EIR for the Sky Valley Orchards Project (Administrative Draft), Wagstaff and Asso., 10/92.
22. GVRD Adult Softball Complex Feasibility Study, Progress Report, Callander Asso., 12/90.
23. Vallejo General Plan, 1990.

24. **Air Quality Element, Vallejo General Plan, 1990.**
25. **Housing Element, City of Vallejo, 1990.**
26. **Educational Facilities Element of the Vallejo General Plan, 1990.**
27. **Sky Valley Specific Area Plan, Vallejo, Sky Valley Company, 9/87; adopted by the Vallejo City Council on 9/15/87.**



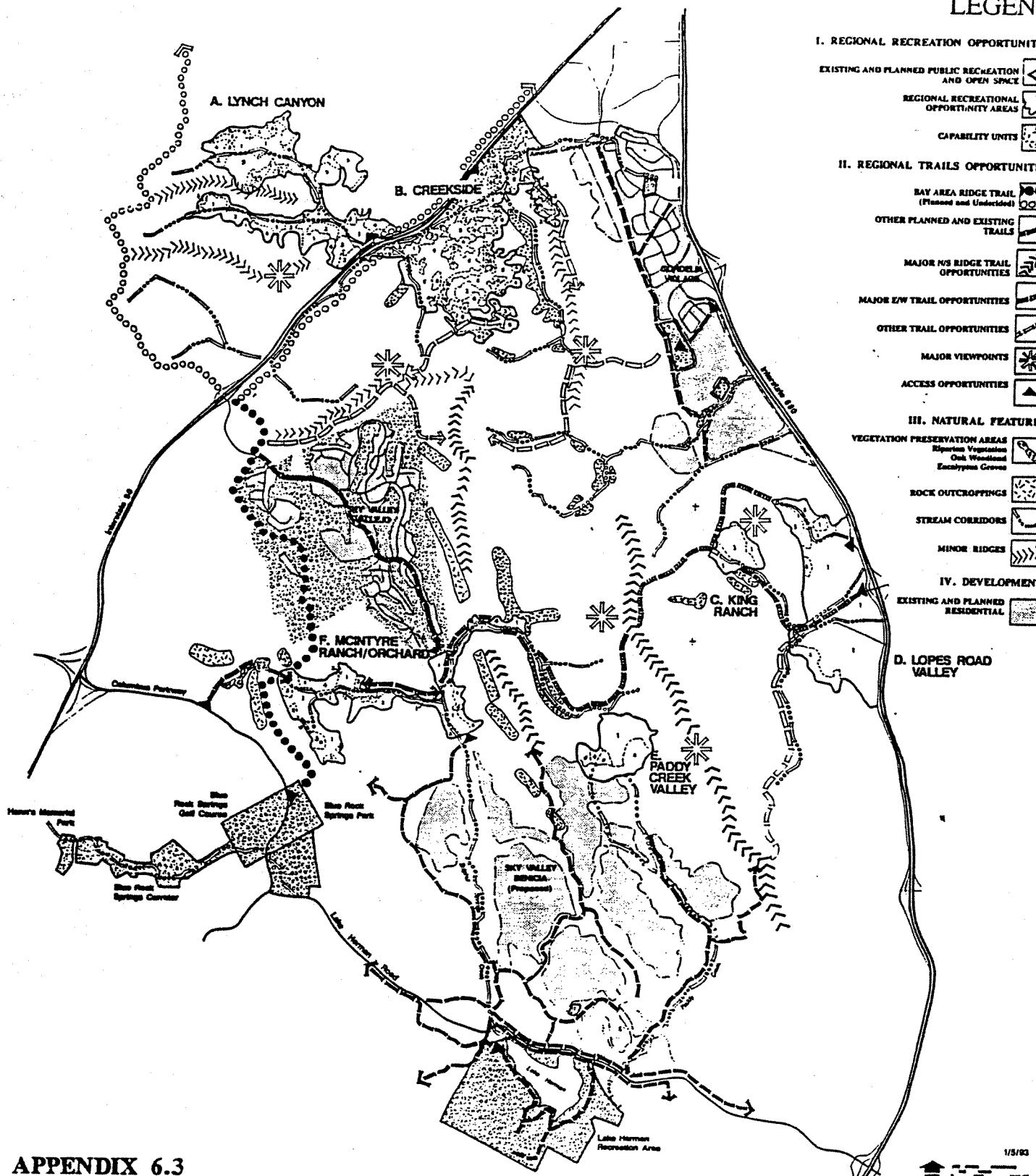
6.2 PERSONS CONTACTED

Art Henriquez, City of Santa Clara
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Lu de Silva, PG&E
Mary Ilyin, PG&E
John Newman, PG&E
Byron Woertz, PG&E
Jim Schmitt, PG&E Properties
Ron Azevedo, Property Owner
Ralph Azevedo, Property Owner
Sally Brittain, Property Owner
Roland Ellsworth, Property Owner
Albert Guyan, Property Owner
Ronald Halterman, Property Owner
Gary Mangles, Property Owner
Bill & Crowell Sinclair, Property Owners
Marshall Tuttle, Property Owner
Al Stanley, Seeno Construction Company
Don Brown, Sky Valley Company
Dan Osbourne, Sky Valley Company
Nicholas Petredis, Sky Valley Company
Jim Syar, Syar Industries
Malcolm Carpenter, Syar Industries
John Perry, Syar Industries
Bill Robbins, Syar Industries

LEGEND

- I. REGIONAL RECREATION OPPORTUNITIES**
- EXISTING AND PLANNED PUBLIC RECREATION AND OPEN SPACE
 - REGIONAL RECREATIONAL OPPORTUNITY AREAS
 - CAPABILITY UNITS
- II. REGIONAL TRAILS OPPORTUNITIES**
- BAY AREA RIDGE TRAIL (Planned and Undecided)
 - OTHER PLANNED AND EXISTING TRAILS
 - MAJOR N/S RIDGE TRAIL OPPORTUNITIES
 - MAJOR E/W TRAIL OPPORTUNITIES
 - OTHER TRAIL OPPORTUNITIES
 - MAJOR VIEWPOINTS
 - ACCESS OPPORTUNITIES
- III. NATURAL FEATURES**
- VEGETATION PRESERVATION AREAS
 - Kipapa Vegetation
 - Oak Woodland
 - Eucalyptus Groves
 - ROCK OUTCROPPINGS
 - STREAM CORRIDORS
 - MINOR RIDGES

- IV. DEVELOPMENT**
- EXISTING AND PLANNED RESIDENTIAL



APPENDIX 6.3

PARK & OPEN SPACE OPPORTUNITIES

Tri City and County
Cooperative Plan For
Agriculture and Open Space



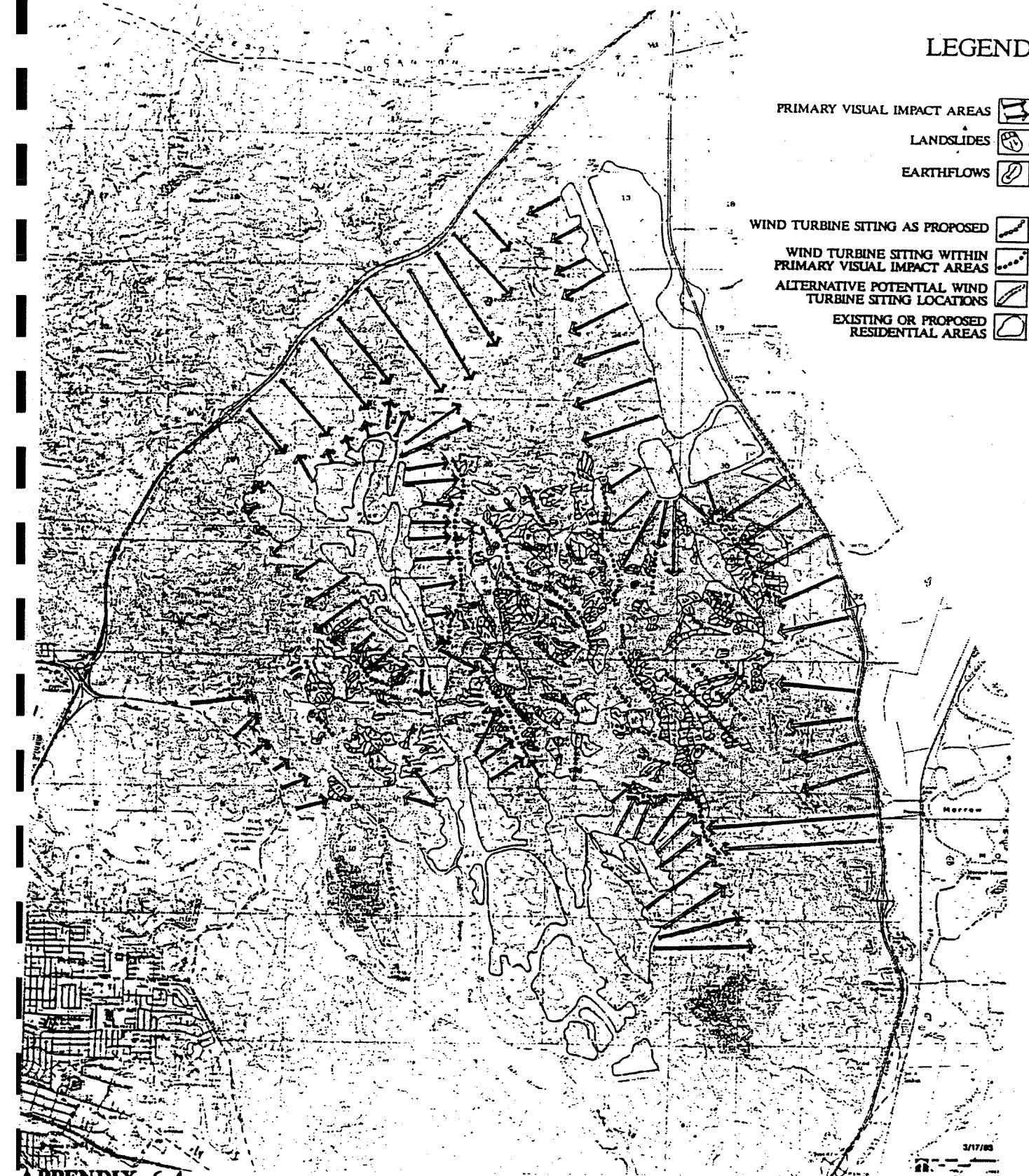
Prepared for:
THE TRI-CITY & COUNTY
REGIONAL PARK AND
OPEN SPACE GROUP

Solano County
Cities of Benicia
Fairfield & Vallejo

LEGEND

- PRIMARY VISUAL IMPACT AREAS
- LANDSLIDES
- EARTHFLOWS

- WIND TURBINE SITING AS PROPOSED
- WIND TURBINE SITING WITHIN PRIMARY VISUAL IMPACT AREAS
- ALTERNATIVE POTENTIAL WIND TURBINE SITING LOCATIONS
- EXISTING OR PROPOSED RESIDENTIAL AREAS



APPENDIX 6.4

PRELIMINARY WIND TURBINE SITING CONSTRAINTS ANALYSIS

Tri City and County
Cooperative Plan For
Agriculture and Open Space



Prepared for:
THE TRI-CITY & COUNTY
REGIONAL PARK AND
OPEN SPACE GROUP

Solano County
Cities of Benicia,
Fairfield & Vallejo

APPENDIX 6.5

RECREATION ACTIVITIES AND FACILITIES

ACTIVITY/FACILITY	POSSIBLE LOCATIONS					
	Lynch Canyon	Creekside	King Ranch	Lopes Road Valley	Paddy Crk Valley	McIntyre/ Orchard
Picnic						
Walk-in						
Family/Small Group						
Medium Group (25-100)						
Large Group (100+)						
Group Assembly						
Amphitheater						
Meetings & Classes						
Special Events						
Day Camp						
Interpretive Center						
Conference Center						
Field Sports & Events						
Overnight Uses						
Walk-in Camping/Family						
Walk-in Camping/Group						
Car Camping-Tents						
Car Camping-RV's						
Group Camping						
Equestrian Camping						
Trail Uses						
Hiking						
Backpacking						
Interpretive Trail						
Mountain Bikes						
Equestrian						
Special Events/Races						
Other Uses						
Animal Petting Farm						
Equestrian Camp						
Working Ranch						
Trap Shooting						
Archery Range						
Swim Facility						
Fishing						
Golf Course						
Supporting Activities						
Equestrian Rental						
Bicycle Rental						
Food Concession						
Administrative Offices						
Maintenance Area						
Ranger Residence						
Entry/Access Control						

6.6 DEFINITION OF OPEN SPACE

Under General Plan law in California, open space is defined as follows (California Government Code 65560 a, b1, b2, b3, b4):

Open space land is any parcel or area of land or water which is essentially unimproved and devoted to an open space use...and which is designated on a local, regional, or state open space plan as any of the following:

- 1) Open space for the preservation of natural resources**, including, but not limited to, areas required for the preservation of plant and animal life, including habitat for fish and wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, bays and estuaries; and coastal beaches, lakeshores, banks of rivers and streams and watershed lands.
- 2) Open space used for the managed production of resources**, including but not limited to forest lands, rangeland, agricultural lands and areas of economic importance for the production of food or fibre; areas required for recharge of groundwater basins; bays, estuaries, marshes, rivers and streams which are important for the management of commercial fisheries; and areas containing major mineral deposits, including those in short supply.
- 3) Open space for outdoor recreation**, including but not limited to, areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes, including access to lakeshores, beaches, and rivers and streams; and areas which serve as links between major recreation and open space reservations, including utility easements, banks of rivers and streams, trails, and scenic highway corridors.
- 4) Open space for public health and safety**, including but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, flood plains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs and areas required for the protection and enhancement of air quality.

APPENDIX 6.7

Sec. 28-21. EXCLUSIVE AGRICULTURAL (A) DISTRICTS.

(a) The board of supervisors finds that agriculture is a major industry of the county, and that for the protection of agriculture and in order to prevent further encroachment upon it by incompatible uses of property and for the general welfare of the county as a whole, there is hereby created a zone classification within which agriculture shall be encouraged to the exclusion of such other uses of land as may be in conflict therewith. Therefore, the provisions of this section shall be liberally interpreted insofar as they apply to agricultural pursuits and services to the end that no other use shall be permitted, and no regulations shall be deemed or constructed to interfere with any normal accessory use conducted in conjunction therewith. It is the intention of this section to deter developers from considering lands in an A-20, A-40, A-80 or A-160 exclusive agricultural zone as potential urban or suburban property, to provide maximum protection to existing and future agricultural enterprises from restrictions instituted at the request of present or future residents, and to encourage in every way the highest and best agricultural use of the lands so classified, including the necessary residences for farm labor and other similar uses necessary and incidental thereto.

It is expressly understood that areas A-20, A-40, A-80 or A-160, exclusively agricultural in accordance herewith, shall be used exclusively for agriculture. It is further understood that there is no reasonable probability of the removal or modification of this zoning restriction within the near future.

Use permits may be issued authorizing use of part of the land in such zones for recreational, educational, religious or necessary public service purposes as provided herein, where and to the extent that such are necessary to serve such zones or the community where alternate sites are not available; and provided, such issuance and use shall not in any sense invalidate such exclusive zoning classification or designation.

The purpose and intent of the A district is to preserve lands best suited for permanent agricultural use from the encroachment of incompatible uses. Changes of zones from A-20, A-40, A-80 or A-160 to another classification are to be made only where such uses are in accord with the general plan, and where it has been clearly demonstrated that such agricultural land is needed for urban expansion and there is no other land available; and that utilities, road access and public facilities are readily available so that orderly development may occur.

(b) Uses allowed:

- (1) Agriculture, except that those uses indicated in subsection (c) of this section may be established only after a use permit shall have first been secured.

- (2) Roadside stand for the sale of agricultural products grown or produced on the premises when located not less than eight feet from the centerline of the street.
 - (3) Processing of products produced on the premises.
 - (4) Buildings and uses clearly accessory or incidental to any permitted use located on the premises, including a one-family dwelling or manufactured dwelling, a companion living unit, barns, private stable, shed and other farm buildings.
 - (5) Three on-site signs with a total combined area of sixty square feet appurtenant to any permitted use; provided, that no sign shall be permitted to overhang the public right-of-way, nor shall any sign be permitted which moves, blinks, flashes, oscillates, rotates, pulses in sequence, or is wind-driven or otherwise animated.
 - (6) Signs not exceeding six square feet in area for each building site advertising the sale or lease of property upon which displayed.
- (c) Uses permitted, provided the conditions for a use permit as set forth in section 28-53 are fulfilled:
- (1) Animal feed yard.
 - (2) Processing of agricultural products other than those produced on the premises, but not including commercial or industrial enterprises not in harmony with the agricultural environment.
 - (3) Dumping, disposal, incineration, or reduction of refuse.
 - (4) Farm labor quarters or labor camp.
 - (5) Commercial kennel for dogs or cats.
 - (6) Cemetery, crematory, mausoleum, columbarium.
 - (7) Airport and heliport.
 - (8) Public stable, horse show, lodge, club or resort for swimming, boating, fishing, hunting or shooting, and similar types of uses as may be determined by the planning commission.
 - (9) Public service facility, nursery school, church or nursing home.
 - (10) Repealed.
 - (11) Roadside stand for the sale of agricultural products grown or produced on the premises when located within eighty feet of the centerline of the street.

(12) Rural resident enterprises.

(13) Agriculture service uses, provided such uses are limited to:

- a. Bulk storage and/or sale of products such as fertilizers, chemicals for weed and insect control, petroleum products, seeds, animal feeds, fencing material, pipe, and stakes, the primary purpose of which clearly serves commercial agriculture.
- b. Corporation yard for storage and maintenance of equipment and/or supplies used in the conduct of services peculiar to agriculture, such as trucking of farm crops and products, including milk, grain, tomatoes, sugar beets and the like, or conduct of a custom farm service, including spraying, land leveling, harvesting, and irrigation operations.
- c. Farm machinery repair, including all those services normally conducted in a machine, general repair or welding shop, the primary purpose of which clearly serves commercial agriculture.
- d. Animal hospitals and/or veterinarian services.

(14) Additional one-family dwellings or manufactured dwellings for persons employed on the premises when such residential use is clearly accessory or incidental to the agricultural use of the property.

(15) Fertilizer plant and yards, including composting.

(d) Minimum parcel area required:

<u>ZONE</u>	<u>MINIMUM PARCEL AREA</u>
A-20	20 acres
A-40	40 acres
A-80	80 acres
A-160	160 acres

(e) Minimum front yard required: Thirty feet, except that buildings shall not be less than fifty feet from the centerline of the street, and unless otherwise indicated by building lines on the zoning map.

(f) Minimum side yard required: Twenty feet.

(g) Minimum rear yard required: Twenty-five feet.

- (h) Special yards and distances between buildings required: Accessory buildings shall not be less than sixty feet from the front property line nor less than twenty feet from any side or rear property line, nor less than ten feet from any dwelling unit on the property.
- (i) Maximum building height: Twenty-five feet; provided, that additional height may be permitted for non-dwelling structures, including windmills, silos, private water tanks; and provided further, that no such structure shall exceed the heights allowed in section 28-59 if located in an airport flight obstruction area.

APPENDIX 6.8

ENVIRONMENTAL SUITABILITY EVALUATION

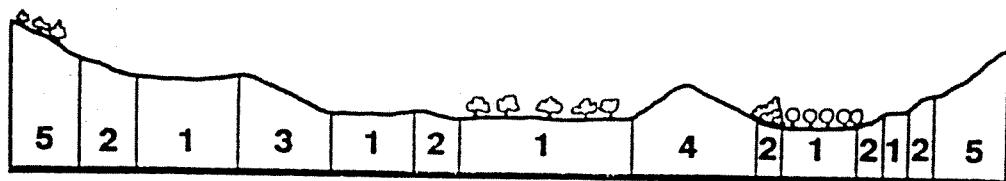
CAPABILITY MATRIX

VEGETATION FACTORS	TERRAIN FACTORS (% Slope)					
	0-15%	0-15% Slides	15-20%	15-20% Slides	20-30%	Over 30%
Grassland	1	3	2	4	4	5
Oak Woodland	1	3	2	4	4	5
Riparian Woodland	2	3	4	4	4	5

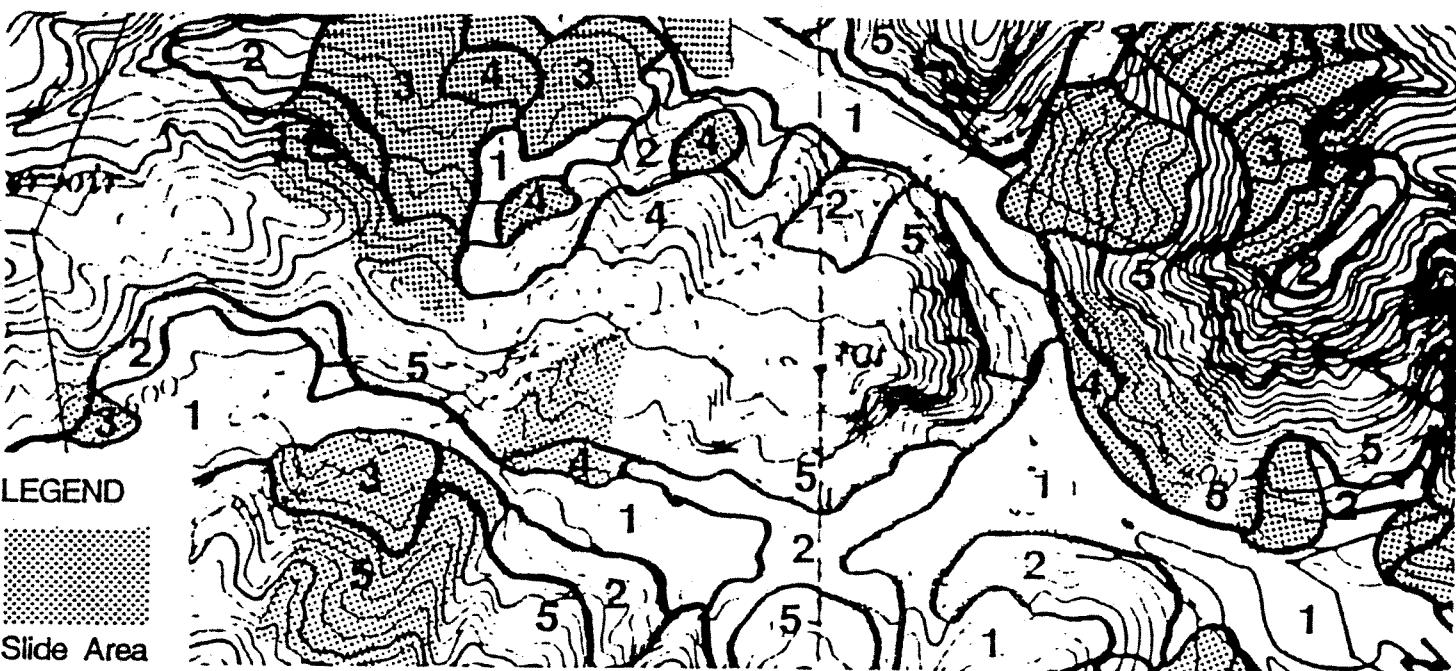
LEGEND

Degree of Development
1 - Intensive
2 - Moderate
3 - Selective
4 - Minimal
5 - Restricted

TYPICAL SITE SECTION



RECREATION CAPABILITY MAPPING



Appendix 6.9 PRESERVATION PLAN AMENDMENT PROCESS

