



**COUNTY OF SOLANO
GENERAL PLAN UPDATE**

**CAC WORKBOOK
LAND USE ALTERNATIVES
VALLEJO-BENICIA AREA**

SEPTEMBER 10, 2007

This workbook is designed for use by Citizen Advisory Committee (CAC) members to prepare for the August 27, 2007, CAC meeting addressing land use alternatives for the South Vacaville-Fairfield-Suisun City Planning Area.

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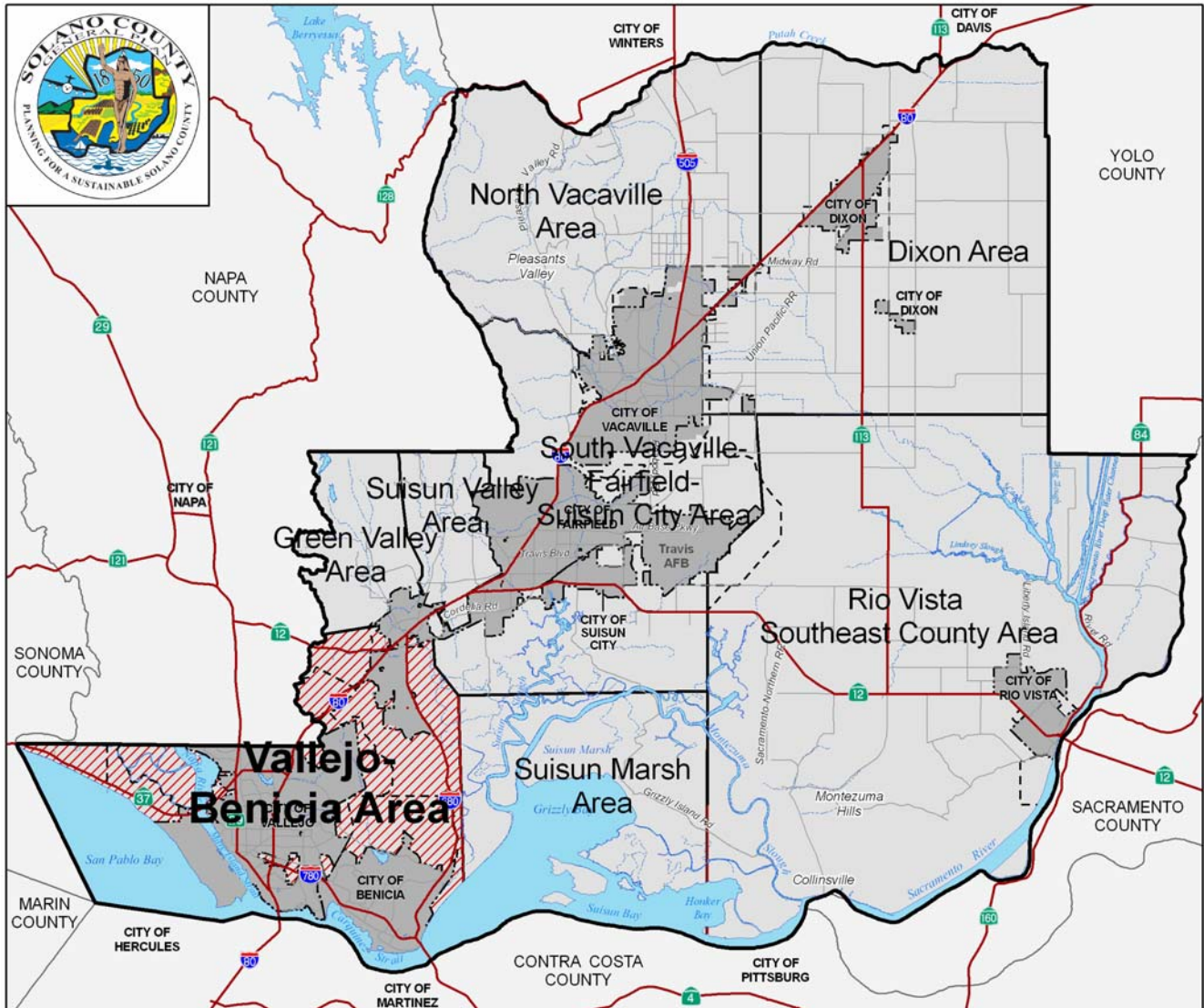
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Members of the CAC should review this workbook before the September 10 meeting and come prepared to offer comments and suggestions at the meeting. Comments can be provided by making notes in the spaces provided. CAC members may also e-mail their comments to Diane Buschman (dbuschman@solanocounty.com) by Monday, September 10, at 9:00 a.m. Staff will assemble the comments for distribution at the CAC meeting. Please submit comments by topics in the same order as in the workbook.



I. INTRODUCTION

As part of the General Plan update process, the CAC is asked to consider land use alternatives for Solano County (County). The unincorporated county area has been divided into eight geographical planning areas identified by County staff and the consultant team for review and discussion purposes. This workbook focuses on the alternatives for the Vallejo-Benicia Planning Area (VBPA).

CAC members are encouraged to review the information in this workbook and come prepared to discuss these items at the September 10, 2007, CAC meeting. This workbook provides a summary of three land use alternatives and a discussion of the land use recommendations for each alternative. These recommendations are being called change areas. Background information can be found in the appendices.

II. SUMMARY OF ALTERNATIVES

Alternatives were developed with consideration of the various preliminary policies and background information presented in the working papers. The alternatives, to varying degrees, also reflect the Emerging Vision statement and preliminary policies as developed by the CAC and the wider community. Two alternative land use scenarios are proposed in addition to an alternative in which existing General Plan land use designations remain.

- ▶ **Alternative 1** maintains current General Plan land use designations in the VBPA. All new residential growth is accommodated in currently designated residential areas. New and expanded businesses will occur through the current supply of commercial and industrial designated lands, which are generally located adjacent or within city boundaries. The County will maintain the existing General Plan's current level of protection of natural resources. (Figure 2 identifies the land uses proposed within Alternative 1.)
- ▶ The primary concept of **Alternative 2** is to change land use designations to reflect city general plans, existing uses and to increase residential density in a few select areas of the County. The changes in Alternative 2 ensure that county land uses correspond with existing land uses and with city general plan designations within the cities' SOIs. In two urbanized areas of the County, Starr Subdivision and Home Acres, increased residential density is proposed in select areas. (Figure 3 identifies land uses proposed within Alternative 2, and identifies changes from Alternative 1 conditions.)
- ▶ **Alternative 3** seeks to implement existing and proposed County policies regarding public safety, conservation, and the protection of open space and agricultural lands. One of the main distinctions of Alternative 3 is a resource conservation overlay that would be created to facilitate proposed resource protection policies. As in Alternative 2, increases in residential densities are proposed in the Starr Subdivision and Home Acres neighborhoods, but Alternative 3 also proposes mixed-use residential/commercial designations. As in Alternative 2, expansion of residential, commercial or industrial designations areas would be limited to areas within the city SOIs and urbanized areas of the County. (Figure 4 identifies proposed land uses for Alternative 3, and identifies changes from Alternative 1 conditions.)

Figure 1 shows the alternatives side by side for comparison purposes. Figures 2 through 4 show the alternatives individually and provide more detail.

Figure 1: Land Use Alternative Comparison

Figure 2: Land Use Alternative 1

Figure 3: Land Use Alternative 2

Figure 4: Land Use Alternative 3

III. CHANGE AREAS

The following section provides a description of the specific land use changes proposed and the areas that may be potentially affected. These “change areas” are found on each of the alternative maps, shown as numbers 1-12.

**Table 1:
Change Areas**

Change Area	Description	Alternative 1	Alternative 2	Alternative 3
1. Napa Marsh	Lands within the Napa Marsh located at the western most tip of the County. The area is recognized by federal, state, and private land owners as a having high value as marshland. Much of the land is managed by governmental agencies for fishery and wildlife purposes and is comprised of wetlands, salt ponds, tidal marshes, and mud flats.	Extensive Agriculture.	Open Space – Marsh to reflect existing uses.	Same as Alternative 2.
2. White Slough Specific Plan	White Slough Specific Plan area.	General Industrial and Commercial Community.	Open Space – Marsh to be consistent with White Slough Specific Plan.	Same as Alternative 2.
3. Vallejo General Plan	Unincorporated land within the Vallejo sphere of influence.	Multiple designations.	Show designations consistent with Vallejo’s General Plan. The existing designations are equivalent to the City’s.	Same as Alternative 2.
4. Starr Subdivision	Starr Subdivision: area on Benicia Road west of I-80. The area is primarily a low density residential neighborhood with a mix of commercial and residential uses fronting on Benicia Road.	Blocks adjacent to Benicia Avenue are designated Commercial Community. The blocks to the south are designated as Residential Low density. The residences on Benicia are currently non-conforming uses.	Two half blocks facing Benicia Road designated as Commercial Neighborhood. Area directly to the south of Benicia Road designated Residential Medium, and the area further south remains Residential Low. Change from Commercial Community to Commercial Neighborhood to	Two half blocks fronting onto Benicia Road designated Mixed-Use – Residential/Commercial to the south remains Residential Low to reflect existing mixed use nature of this area.

**Table 1:
Change Areas**

Change Area	Description	Alternative 1	Alternative 2	Alternative 3
			reflect County, rather than city General Plan designations.	
5. Sandy Beach	Sandy Beach community: unincorporated land that exists between Sandy Beach Road and the Carquinez Straight. The area contains driveways and docks for residential floating homes.	Open Space – Parks/Recreation.	Residential Low to reflect existing uses.	Same as Alternative 2.
6. Home Acres	Home Acres neighborhood. The area straddles I-780 and is east of I-80 and west of Cove Road. The majority of this area contains a wide variety of lot sizes and shapes. The southern portion of the area is more organized and is primary made up of low density residential quarter to half acre lots.	Residential Low. Small circular area north of Benicia Road designated Neighborhood Commercial.	Two blocks adjacent to I-780 designated Residential Medium. The remaining area is designated Residential Low. The Neighborhood Commercial designation is removed.	Blocks on the north and south side of Benicia Road are designated Residential Medium. At the center of the medium density area is a Neighborhood Commercial designated comprising the two half blocks that face Benicia Road. The rest of the Home Acres neighborhood to the north and south remains designated Residential Low.
7. Change for Consistency	Existing trailer park.	Residential Low.	Residential Medium to reflect existing use.	Same as Alternative 2.
8. Benicia General Plan	Unincorporated land within the Benicia sphere of influence.	Multiple designations	Changed to be consistent with Benicia's General Plan.	Same as Alternative 2.
	Large area directly north of the Benicia city limits and west of Suisun Marsh.	Extensive Agriculture, with a small portion of Open Space – Parks/Recreation.	Benicia General Plan designation: Open Space – General.	Same as Alternative 2.
	Small area north of Benicia city limits, east of I-680, and west of Goodyear Road.	Extensive Agriculture.	Benicia General Plan designation: Limited Industrial.	Same as Alternative 2.
9. Old Town Cordelia Special Study Area	This study area was addressed in a separate process and land use designations from that process and CAC recommendations for this area will be included in the preferred alternative.			

**Table 1:
Change Areas**

Change Area	Description	Alternative 1	Alternative 2	Alternative 3
10. Fairfield General Plan	Unincorporated land within the Fairfield sphere of influence.	Extensive Agriculture and Residential Low.	Changed to be consistent with City of Fairfield’s General Plan.	Same as Alternative 2
11. Tri-City Cooperative Area	Tri-City Cooperative Area: established by the Tri-City and County Cooperative Planning Group, a Joint Powers Authority including Vallejo, Fairfield, and Benicia and Solano County. Purpose is to protect 10,000 acres for open space and agricultural preservation.	Extensive Agriculture.	Open Space – Tri-City Cooperative Area in order to reflect planning for this area.	Same as Alternative 2.
12. Resource Conservation Overlay	Change Area 8 contains areas subject to a proposed Resource Conservation Overlay.	NA	NA	Resource Conservation Overlay: more information under proposed designation description.

IV. ALTERNATIVES COMPARISON

The CAC is encouraged to review the alternatives and to ascertain how the varying objectives of each alternative result in a different land use distribution within the VBPA. To assist with this comparison the objectives are outlined below, and Table 6 provides comparative land use acreages. There are five locations in the VBPA that have been recommended for change in the alternatives. These areas are found on the alternative maps and a short description of each is found below.

ALTERNATIVE 1 – EXISTING GENERAL PLAN

OBJECTIVES:

- ▶ Maintain existing General Plan designations
- ▶ Accommodate new residential growth in currently designated residential areas
- ▶ Accommodate new businesses within current supply of commercial designated lands
- ▶ Maintain the current General Plan's level of protection of natural resources

ALTERNATIVE 2 – MODERATE RESIDENTIAL INFILL

OBJECTIVES:

- ▶ Increase residential densities in select urban areas
- ▶ Defer to cities' General Plan for those areas within their sphere of influence
- ▶ Reflect existing uses in General Plan
- ▶ Change designations to match County designations rather than city in specific areas not be annexed
- ▶ Reflect other planning efforts through new designation (Tri-City Cooperative Planning Area)

ALTERNATIVE 3 – RESOURCE PROTECTION & MIXED USE CENTERS

OBJECTIVES:

- ▶ Protect the County's natural resources
- ▶ Reflect existing mixed use areas through new designation
- ▶ Reflect other planning efforts through new designation (Tri-City Cooperative Planning Area)
- ▶ Defer to cities' General Plans for those areas within their sphere of influence

Table 2
Land Use Comparisons Between Alternatives

	Alternative 1			Alternative 2			Alternative 3		
	Acres	Units	Square Feet	Acres	Units	Square Feet	Acres	Units	Square Feet
Extensive Agriculture	25,208	158 to 1,260		13,016	81 to 651 units		13,016	81 to 651	
Business & Administrative Office	7		76,354						
Neighborhood Commercial	6		65,491	16		170,950			
Commercial Service	6		69,066	6		69,066	6		69,066
Community Commercial	50		541,903						
General Industrial	134		1,747,707	46		604,652	46		604,652
Limited Industrial	40		517,114	3		33,207	3		33,207
Mixed Use							23		
Marsh	4,089			11,147			11,147		
Parks and Recreation	504			333			333		
Water	6,465			6,465			6,465		
Public	1								
Low Density Residential	853	1706 to 5,972		596	1,193 to 4,175		566	1,132 to 3,964	
Rural Residential	34	3 to 13							
Residential Suburban	39	30 to 155							
Residential Medium				50	398 to 746		73	584 to 1,096	
Benicia SOI				5,300			5,300		
Fairfield SOI				360			360		
Defer to Cordelia SSA				97			97		
Total	37,434	1,897 to 7,400	3,017,635	37,434	1,672 to 5,572	877,875	37,434	1,797 to 5,711	706,925

¹Commercial square footage (sf) was estimated using a .25:1 floor-area ratio (FAR). Industrial square footage was estimated using a .30:1 FAR.

Source: Solano County GIS 2007, EDAW 2007

V. PROPOSED LAND USE CLASSIFICATIONS

This section presents a new land use classifications that is proposed for use in the VBPA. This designation could be incorporated into the forthcoming General Plan. For descriptions of existing General Plan land use classifications see Appendix II.

MIXED-USE – RESIDENTIAL/COMMERCIAL

Purpose: The purpose of a new Mixed-Use – Residential/Commercial designation is to encourage a mix of compatible uses in certain unincorporated urban areas. In locations where there is a historic pattern of mixed commercial and residential uses, this designation is meant to recognize and encourage the continuation of this pattern.

TRI-CITY COOPERATIVE PLANNING AREA

Purpose: The intent of the proposed Tri-City Cooperative Planning Area designation is to identify the area of the County subject to the Tri-City and County Cooperative Plan and reflect it on the General Plan map. The Cooperative Plan would be incorporated into the General Plan as a special policy document and the County would defer to the plan in this area.

RESOURCE CONSERVATION OVERLAY

Purpose: The intent of the proposed Resource Conservation Overlay designation is to identify areas of the County with special resource management needs and to protect those resources with applicable policies. This designation would recognize the presence of certain important natural resources on the Land Use Diagram, while maintaining the validity of the underlying land use designation. The overlay would work in two ways. It would both serve to protect the resources within the overlay area by requiring study of the potential affect if development is proposed in these locations as well as to provide mitigation to serve urban development. Removal of the overlay from a subject property would be possible with a general plan amendment.

Background: Resources to be protected by use of this overlay are restricted to those that have been identified as the highest priority areas. Priority areas were set using data received from the Habitat Conservation Plan process.

Conservation Measures / Compatible Districts / Restrictions & Limitations: The conservation measures used to achieve the county's resource conservation goals are dependent on the targeted resource. Descriptions of the conservation measures, restrictions, and compatible districts applicable to each targeted resource are provided below.

VERNAL POOL CONSERVATION AREAS:

Conservation Measures: In context of vernal pool conservation, only those areas designated as high priority were placed into the Resource Conservation Overlay. These high priority areas should remain in extensive agricultural uses. If a project is proposed in these areas, the County would require a site assessment in order to determine potential impacts to the resource. If site design cannot eliminate impacts, then use of a transferable development right (TDR) system should be explored in order to remove development potential from subject properties and to compensate property owners. Development rights from properties within the Resource Conservation Overlay area could be purchased by a County sponsored bank. These development rights could, in turn, be purchased from the bank by developers seeking to increase the density of a development project in suburban and urban residential areas of the County and participating cities. The identified areas could also serve as a mitigation bank for impacts to vernal pools occurring within other parts of the county and cities.

Restrictions: In vernal pool conservation areas extensive agricultural practices (i.e., grazing of sheep, cattle, other livestock) and open space uses would be allowed. Intensive agriculture is not compatible with vernal pool communities.

SUISUN MARSH PROTECTION PLAN MANAGEMENT ZONE

Conservation Measures: Development in the Suisun Marsh Protection Plan Management Zone is restricted by the Suisun Marsh Protection Plan as administered by the San Francisco Bay Conservation and Development Commission (BCDC) and the Department of Fish and Game.

Restrictions: Residential, commercial, and industrial development is prohibited within the Suisun Marsh area per the Suisun Marsh Protection Plan. See Suisun Marsh Protection Plan for details.

CALIFORNIA RED-LEGGED FROG—CRITICAL HABITAT AREA AND CORE RECOVERY AREAS

Conservation Measures: In the context of California red-legged frog critical habitat areas and core recovery areas, development should be minimized by maintaining existing open space and agricultural land use designations. Due to the susceptibility of the species to development and increases in impervious surfaces, a transferable development right system should be utilized (see vernal pools discussion for description of TDR system) to remove development from the identified areas.

Restrictions: In California red-legged frog critical habitat areas and core recovery areas extensive agricultural practices (i.e., grazing of sheep, cattle, other livestock) and open space uses would be allowed. Intensive agriculture is not compatible with California red-legged frog habitat. Mechanisms that encouraged landowners to maintain or restore riparian buffers along streams, creeks, canals, and wetlands should be explored. Wetlands in the identified area should not be removed or degraded.

CALLIPPE BUTTERFLY – PRIORITY CONSERVATION AREA

Conservation Measures: In context of Callippe butterfly conservation areas, priority should be placed on maintaining the existing extensive agricultural land use designation which makes up the majority of the identified area. Additionally, a site assessment should be required for any proposed development within the area in order to determine potential impacts on the species and its host habitat. If site design cannot eliminate impacts, then use of a TDR system should be explored in order to remove development potential from subject properties and to compensate property owners. The identified area could also serve as a mitigation bank for impacts to Callippe butterfly habitat occurring elsewhere in the region.

Restrictions: In Callippe butterfly conservation areas extensive agricultural practices (i.e., grazing of sheep, cattle, other livestock) and open space uses would be allowed. Intensive agriculture is not compatible with Callippe butterfly habitat.

GIANT GARTER SNAKE PRIORITY CONSERVATION AREAS

(Not present in Vallejo-Benicia Planning Area)

PRIORITY HABITAT CORRIDORS:

(Not present in Vallejo-Benicia Planning Area)

VI. APPENDICES

APPENDIX 1 – EXISTING LAND USES

Table 1 summarizes existing land uses in the unincorporated portions of Solano County. Figure 1 depicts existing land uses in the VBPA.

Table 3
Existing Land Uses in the Vallejo-Benicia Planning Area

Land Use	Acres	Percent of Total Area	Units/Square Feet ¹
Agriculture	480	1.61%	
Range and Watershed	14,844	49.90%	
Marsh	2,741	9.21%	
Civic	10,445	35.11%	
Commercial	432	1.45%	4,703,658 sf
Commercial Recreation	3	0.01%	34,429 sf
Industry	398	1.34%	5,201,374 sf
Mobile Home	6	0.02%	48 units
Multifamily Residential	44	0.15%	241 units
Single-Family Residential	289	0.97%	289 units
Vacant	69	0.23%	
Total Commercial Square Footage			9,939,461 sf
Total Residential Units			578 units

¹ Commercial square footage (sf) was estimated using a .25:1 floor-area ratio (FAR). Industrial square footage was estimated using a .30:1 FAR.

Source: County of Solano Assessor's Office 2006, EDAW 2006

Figure 5: Existing Land Uses

APPENDIX II – EXISTING LAND USE CLASSIFICATIONS

This section presents the existing land use classifications used within the South Vacaville area. These designations are subject to revision as part of the General Plan update process. These descriptions refer to current land use designations within the area and will be revised to be consistent with the new land use classification system to be recommended by the CAC.

WATERSHED—ONE DWELLING UNIT (DU)/160 ACRES

Hills and mountains compose the watershed areas, which are characterized by Class VI, VII, or VIII soils and are typically in extensive agricultural use, primarily for grazing. Retention in extensive agricultural uses is supported by the presence of hazardous characteristics including undevelopable, steep slope areas with high potential for soil erosion, fires, unstable soils, limited access and limited water availability. Watershed areas also provide wildlife habitat and have high potential for water quality degradation because of soil and slope conditions.

MARSH

Consists of marsh and wetland areas. Permitted uses 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, educational and scientific research opportunities and resources, and restoration of historic tidal wetlands.

PARK & RECREATION

This category identifies specific park areas and their uses and activities.

WATER BODIES AND COURSES

Designates major water ways and lakes in the county.

INTENSIVE AGRICULTURE: ONE DU/80 ACRE AND ONE DU/40 ACRES FOR “HIGHLY PRODUCTIVE” LANDS

Intensive Agriculture areas comprise generally highly fertile soils brought into intensive production through irrigation. Designated areas reflect high quality soils and cropland for significant economic and specialty crops. The intent of this designation is to protect these areas from intrusion of nonagricultural uses and further urban encroachment. Agricultural-related housing is also permitted within agriculturally designated areas to provide for farm residences and necessary residences for farm labor housing.

EXTENSIVE AGRICULTURE: ONE DU /160 ACRES (ONE DU/20 ACRES POSSIBLE IN AREAS WITH LIMITED AGRICULTURAL VIABILITY)

Extensive Agriculture areas are composed generally of nonirrigated lands, including rolling and hilly slopes that are not suited for irrigated agriculture. Uses include dryland farming and grazing activities. Extensive Agriculture areas contribute significantly to the local agricultural economy. The intent of this designation is to protect these areas from intrusion of nonagricultural uses. The designation also includes lands that would pose potential health and safety hazards were they to be developed for urban uses, including lands around aviation facilities. The designation also includes areas that may have potential for development beyond the time frame of the General Plan update. These areas are to remain in agricultural use until conversion to nonagricultural uses becomes

necessary. Limited recreational opportunities are permitted in Extensive Agriculture areas and limited industrial development in the center of the county may be permitted. Agricultural-related housing is also permitted within agriculturally designated areas to provide farm residences and necessary residences for farm labor housing

RURAL RESIDENTIAL: 0.1–0.4 DU/ACRE, (2.5–10 ACRE LOTS)

Rural Residential areas provide for single-family residences on 2.5- to 10-acre parcels. This designation is typically applied to “nonessential” agricultural lands for single-family dwelling units where amenities for rural living and privacy exist. The intent of this designation is that only minimal public facilities and services essential to protect the public health, safety, and welfare will be provided to support this use. Rural Residential areas are primarily served by individual water and sewer systems, although lots smaller than 5 acres must be provided with public water. Clustering of residential units is permitted.

LOW: 2–7 DU/ACRE

Residential Low is an urban residential designation applied and confined to areas within city urban growth areas. These areas are intended to be annexed and developed by City jurisdictions that have the necessary services and facilities to support development at urban densities.

MEDIUM: 8–15 DU/ACRE

Residential Medium is an urban residential designation applied and confined to areas within city urban growth areas. These areas are intended to be annexed and developed by City jurisdictions that have the necessary services and facilities to support development at urban densities.

COMMUNITY COMMERCIAL

The Community Commercial designation is found on some unincorporated areas within or adjacent to city boundaries. Community Commercial is not specifically defined in the County’s current Land Use element. It is generally associated with the city in which the designation is used. In select locations in Vallejo, this designation is used in accordance with the definition found in the Vallejo General Plan.

In Vallejo, Community Commercial is a type of Retail Commercial Development. It “provides convenience goods, personal services, professional financial, automobile services, plus limited variety of shopping goods.”

COMMERCIAL SERVICE

The Commercial Service designation is applied to areas that provide commercial service activities requiring large land areas and easy access to major transportation facilities. Commercial service uses include retail and intermediary activities that serve specialized needs on a daily or less than daily basis. Expansion or development of new commercial service areas should take place in conformance with City policies.

COMMERCIAL SERVICE – LIGHT INDUSTRIAL

This designation includes commercial service uses intermixed with industrial use, and applies to the Peabody Road area based on the existing pattern of development. Area is located within the Fairfield Urban Growth Line and annexation is not expected in the foreseeable future. Any future development would be by special use permit with termination of the use upon annexation.

COMMERCIAL RECREATION

This designation applies to waterfront areas for construction of a marina and development of complementary water-related commercial facilities. These uses will be compatible with the primary activity of the waterfront. Permitted uses will include small-scale, water-oriented development, including restaurants, commercial lodging, retail shops, boat sales, a boat launching ramp, and facilities for boat construction and repair.

HIGHWAY COMMERCIAL

The Highway Commercial designation applies to areas contiguous to selected freeway interchanges to provide necessary retail activities to serve highway travelers. Typical uses consist of automobile services and repair stations, hotels, motels, restaurants, and refreshment stands.

LIMITED INDUSTRIAL

The Limited Industrial designation applies to industrial operations that are of a relatively low intensity and “clean” character. Such uses include those in which all operations are conducted within structures, such as large scale administrative facilities, scientific and research institutions, warehousing and distribution areas, and specialized and light manufacturing and assembly operations of a nonnuisance type. Industrial park type development is focused within city industrial areas.

GENERAL INDUSTRIAL

Designed to accommodate industries which are labor or traffic intensive, require large sites for both indoor and outdoor operations in a manner which will allow normal operation of nearly all industries. Such operations include manufacturing, processing, disassembling and assembling and storage of products and materials. This designation is applied to areas with a reasonable degree of isolation from residential and agricultural uses where necessarily services can readily be provided. Solano County has flexibility to designate new locations General Industrial if necessary for new, specialized businesses beneficial to the county.

PUBLIC

The Public designation includes airports, schools, solid waste facilities, hazardous waste facilities, and other public facilities.

APPENDIX III – CONSTRAINTS AND OPPORTUNITIES

The purpose of the following analysis is to assess the existence and location of hazard and resource constraints and opportunities within the planning area. The analysis provides information used to evaluate the existing allocation of land uses, to review proposed land use amendments for the General Plan update process, and to recommend land use alternatives for CAC consideration.

The constraints used in the alternatives planning process include both constraints for which there is a policy and/or legal basis for restricting or prohibiting development and constraints that lack such a basis, but where limiting or prohibiting development would contribute to the betterment of the community's health, safety, and welfare.

The constraints used include fire threat, fault traces, flood zones, sensitive habitat areas, natural resource areas, and human health protection zones. GIS information regarding landslides, slope stability, and erosion were unavailable at the time this analysis was prepared. These constraint layers are being prepared by Solano County (County) and will be applied to future development proposals on a case-by-case basis. "Constrained" areas of the planning area are not unilaterally determined to be unsuitable for development; rather, depending on the particular hazard and/or level of resource vulnerability, the size/location of the underlying parcel, the proposed land use, and other factors, the subject land can be constrained to three different degrees. These include the following:

- ▶ *Absolute* Constraint – No or very limited development allowed. Development for human habitation should be prohibited because of public safety concerns. The following constraints/considerations are included in this category:
 - Extreme Wildfire Risk Areas (Not present in the Vallejo-Benicia Planning Area)
 - Alquist-Priolo Earthquake Fault Zones
 - Other active fault zones
 - Airport Land Use Compatibility Zone A (Not present in the Vallejo-Benicia Planning Area)
- ▶ *Partial* Constraint – Limited development allowed with appropriate study. Development should be permitted on only a part of the subject land and the remainder should be protected. The following constraints/considerations are included in this category:
 - 100-year floodplains
 - Very high wildfire risk areas
 - High and very high liquefaction hazard areas
 - Slopes over 25 percent
 - Areas within 100 feet from active faults
 - Airport Land Use Compatibility Zone B (Not present in the Vallejo-Benicia Planning Area)
- ▶ *Conditional* Constraint – Limited development advisable under best practices. Development may be permitted subject to site plan review and imposition of conditions to protect against a hazard or protect a resource. The following constraints/considerations are included in this category:

- Prime farmland
- Farmland of statewide importance (Not present in the Vallejo-Benicia Planning Area)
- Wetlands (Not present in the Vallejo-Benicia Planning Area)
- Asbestos Hazard Areas
- Areas within 100 feet from streams and creeks (Not present in the Vallejo-Benicia Planning Area)
- Residential areas within 500 feet from highways
- Wind energy resource areas

Figure 2 identifies the location of these constraints within the planning area. The remainder of this section provides descriptions of each constraint, provides references to relevant proposed General Plan policies supporting the constraint, and descriptions of the affected portions of the planning area.

HAZARD CONSTRAINTS

Natural and human-made hazards that were incorporated into the opportunities and constraints analysis include the following. Each is described briefly below:

- ▶ Wildland Fire Threat—Extreme (as described and mapped in the health and safety background report)
- ▶ Wildland Fire Threat—Very High (as described and mapped in the health and safety background report)
- ▶ Earthquake Fault Zones (as described and mapped in the health and safety background report)
- ▶ Active Fault 50-Foot Buffer (under Alquist-Priolo Earthquake Faults Zoning Act, and as described and mapped in the health and safety background report) (There are no Alquist-Priolo zones in this part of the County)
- ▶ Liquefaction Hazard Area—High & Very High (as described and mapped in the health and safety background report)
- ▶ 500-Foot Freeway Air Quality Buffer (under 2005 California Air Resources Board guidelines—applied only to proposed residential development)
- ▶ High Slope Areas (greater than or equal to 25%, as described and mapped in the health and safety background report)

Additional factors that may constrain future development include seiche inundation areas, landslide areas, erosive soils, etc. While these factors were not examined in the analysis, they will need to be considered in the analysis of site-specific development reviews.

WILDLAND FIRE THREAT—EXTREME

Description: This area includes nonurban areas of the county that are exposed to extremely high risk with regard to fire hazard. Fire threat is a combination of two factors: (1) fire frequency (the likelihood of a given area burning) and (2) potential fire behavior (hazard). The California Department of Forestry’s models combine the two factors to create four threat classes ranging from moderate to extreme.

Relevant Policy: Proposed General Plan Policy HS-19 states, “prohibit non-farm related development and road construction in areas of extreme wildland fire risk.”

WILDLAND FIRE THREAT—VERY HIGH

Description: This area includes nonurban areas of the county that are exposed to high and very high risk with regard to fire hazard. Fire Threat is a combination of two factors: (1) fire frequency (the likelihood of a given area burning) and (2) potential fire behavior (hazard). The California Department of Forestry’s models combine the two factors create four threat classes ranging from moderate to extreme.

Relevant Policy: Proposed General Plan Policy HS-18 states, “require that structures in subject areas be built in fire defensible spaces and minimize construction of public facilities in such areas.”

EARTHQUAKE FAULT ZONES AND BUFFER

Description: Earthquake Fault Zones are areas identified by the State Geologist as being in close proximity to surface traces of active faults. Local agencies must regulate most development projects within the zones. Projects include all land divisions and most structures for human occupancy. Single family wood-frame and steel-frame dwellings up to two stories not part of a development of four units or more are exempt. Before a project can be permitted, cities and counties must require a geologic investigation to demonstrate that proposed buildings will not be constructed across active faults. An evaluation and written report of a specific site must be prepared by a licensed geologist. Additionally, the Alquist-Priolo Earthquake Fault Zoning Act prohibits locating any structure for human occupation within 50’ of an active fault. A 50-foot exclusionary buffer has been established around the locations of active faults (certain and approximate) within the county.

Relevant Policy: The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting. The Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The Act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. Local government can choose to be more restrictive than state law requires.

Proposed General Plan Policy HS-10 states, “review and limit the location and intensity of development and placement of infrastructure in identified earthquake fault zones.”

100-YEAR FLOODPLAIN

Description: A floodplain is an area that will be inundated by a flood from a river, creek, ditch, lake, or other source of flooding. A 100-year flood is the flood that statistically has a 1% chance of occurring each year. The 100-year floodplain is the area that will be inundated by the 100-year flood. It is also the area that is referred to by Federal Emergency Management Agency (FEMA) as the Special Flood Hazard Area.

Relevant Policy: Development in the 100-year floodplain is required to be regulated through a local ordinance that conforms to the National Flood Insurance Program. Proposed General Plan Policy HS-5 states, “Limit development within Zone A, as identified in FEMA Flood Insurance Rate Maps, to agricultural and open space uses or other non-urban, low-capital investment uses.”

LIQUEFACTION HAZARD AREAS

Description: Areas that are classified by the California Geological Survey as having a “High” or “Very High” chance of liquefaction during a major earthquake. Loss of soil strength as a result of liquefaction during an earthquake can result in ground failures at the earth’s surface. These failures, including localized ground settlement and lateral spreading, can cause significant property damage. A "very high" rating typically is assigned to areas of known liquefaction occurrence, saturated artificial fill, and late Holocene saturated, granular deposits.

“High” susceptibility ratings were determined by (1) a liquefaction threshold analysis where borehole data are available and (2) a criteria matrix based on age of deposit and depth to groundwater for areas of insufficient geotechnical data. Liquefaction hazard is likely to increase in Solano County as sea levels rise as a result of climate change.

Relevant Policy: Pursuant to the California Seismic Hazards Mapping Act, development in seismic hazard areas, including liquefaction hazard areas, is subject to policies and criteria established by the State Mining and Geology Board. Approval of development on a site within a seismic hazard area requires the preparation of a geotechnical report and local agency consideration of the policies and criteria set forth by the State Mining and Geology Board (Public Resources Code Section 2690 et. seq.).

FREEWAY AIR QUALITY BUFFER (RESIDENTIAL DEVELOPMENT)

Description: This buffer includes areas within 500 feet of freeways in Solano County and serves to protect public health by reducing human exposure to transportation related pollutants. This buffer would prohibit residential development and other sensitive land uses from being located within 500’ of freeways and urban roads with greater than 100,000 vehicles/day.

Relevant Policy: The California Environmental Protection Agency and California Air Resources Board have recommended that municipal governments avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day. Air pollution studies indicate that living close to high traffic and the associated emissions may lead to adverse health effects beyond those associated with regional air pollution in urban areas. A number of studies identify an association between adverse noncancer health effects and living or attending school near heavily traveled roadways. These studies have reported associations between residential proximity to high traffic roadways and a variety of respiratory symptoms, asthma exacerbations, and decreases in lung function in children.

HIGH SLOPE AREAS (≥25%)

Description: Areas identified in this layer have slopes greater than 25%. These areas may present significant difficulties to development and may contribute, along with other factors, to increased rates of erosion or landslide potential.

Figure 6: Constraints and Considerations

RESOURCE CONSTRAINTS

Resource constraints that were incorporated into the opportunities and constraints analysis include the following:

- ▶ Agricultural Resource Areas (as described and mapped in the land use background report)
- ▶ Wind Energy Resource Area (as described and mapped in the energy background report)
- ▶ Wetlands (as described in the biological resources background report)
- ▶ Aquatic Buffer (applied to streams and creeks)

Additional factors that may constrain future development include areas that contain cultural, scenic, recreational, or mineral resources of statewide importance. While these factors were not examined in the analysis, they will need to be considered in the analysis of site-specific development reviews.

AGRICULTURAL RESOURCE AREAS

Description: This area consists of both Prime Farmland and Farmland of Statewide Importance, as defined by the California Department of Conservation’s Farmland Mapping and Monitoring Program 2006 data. Prime Farmland has 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. Farmland of Statewide Importance is similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. To qualify, land in both categories must have been used for irrigated agricultural production during the 4-year period before the mapping date.

Relevant Policy: County policies concerning agricultural lands are currently under review.

WIND ENERGY RESOURCE AREA

Description: This area consists of sites in Solano County with significant annual average wind resources. The data was produced by National Renewable Energy Laboratories in cooperation with the California Energy Commission. Areas with Class 4 (Good) to Class 7 (Exceptional) wind energy resource levels are included in the constraint layer. The intent of the described area is to build on the County’s Wind Turbine Siting Plan and provide updated spatial definition of wind energy resources in Solano County.

Relevant Policy: Proposed General Plan Policy RS-45 states, “promote alternative and renewable energy sources that can be produced from resources available in Solano County, such as solar, water, wind, and biofuels.” In order to protect the County’s capacity to produce wind energy in the future, wind energy resource areas will need to be protected from incompatible land uses. Land uses in such areas should be limited to agricultural and rural residential uses. In certain cases, industrial uses may also be appropriate.

WETLANDS

Description: This includes areas classified as “wetlands” in the National Wetland Inventory developed by the U.S. Fish and Wildlife Service. Wetlands are defined as “transitional lands between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water.” For purposes of this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes; (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of the year.” – National Wetlands Inventory, U.S. Fish and Wildlife Service

Relevant Policy: Proposed General Plan Policy RS-1 states, “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 essential habitat connections.” Development and other impact-inducing activities should be excluded from wetland areas.

AQUATIC BUFFER (STREAMS AND CREEKS)

Description: This layer identifies a 100-foot buffer around all creeks and streams in the county. Aquatic buffers serve as natural boundaries between local waterways and development and protect resources by filtering pollutants, providing flood control, alleviating stream bank erosion, mitigating stream warming, and providing room for lateral movement of the stream channel. The 100-foot buffer width was determined from a review of scientific literature. The majority of studies indicate that a 100-foot buffer is the most effective width for protecting aquatic and riparian resources. While smaller buffers (>35 feet) provide some protection of biological and physical components of a functioning stream ecosystem, buffers 100 feet and wider provide a greater level of protection of the physical, chemical, and biological characteristics necessary to maintain or restore high quality aquatic resources. Development and other impact-inducing activities should be excluded from areas within the aquatic buffer.

HABITAT CONSTRAINTS

Habitat constraints that were incorporated into the opportunities and constraints analysis include the following. All are described and mapped in the Biological Resources Background Paper.

- ▶ Vernal pool conservation areas
- ▶ Priority habitat corridors
- ▶ California red-legged frog—critical habitat area
- ▶ California red-legged frog —core recovery areas
- ▶ Callippe butterfly—priority conservation area
- ▶ Callippe butterfly—nonpriority conservation area
- ▶ Giant garter snake—priority conservation area

Additional factors that may constrain future development include areas that are known to or are found to contain species or natural habitats of concern (e.g., fairy shrimp, Boggs Lake hedge-hyssop, California tiger salamander). While these factors were not examined in the analysis, they will need to be considered in the analysis and review of individual site-specific projects.

VERNAL POOL CONSERVATION AREAS

Description: Areas within the county that contain high priority vernal pool complexes. Vernal pool grassland associations are characterized by the presence of seasonal wetlands that form in soil types where the infiltration of water is impeded by dense clays or pans below the surface. Vernal pool habitats have become very rare because they are often found in landscapes that favor agriculture. In the last 150 years, the total area of vernal pools in the Central Valley has been reduced by 75%, and the loss between 1994 and 1997 continued at 1.5% per year.

Relevant Policy: Proposed General Plan Policy RS-1 states, “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 essential habitat connections.” Proposed General Plan Policy RS-3 states, “focus conservation and protection efforts toward high priority habitat areas.”

PRIORITY HABITAT CORRIDORS

Description: Linear habitat areas that connect two or more larger blocks of habitat. These corridors are proposed in order to conserve the viability of target wildlife populations in the habitat blocks.

Relevant Policy: Proposed General Plan Policy RS-5 states, “connect natural areas and ensure wildlife corridors are available and not obstructed for wildlife migration.”

Area Affected: Seven major corridors have been identified within Solano County. These include: the Dixon corridor, the Vacaville–Fairfield Green Belt, the Suisun Creek riparian corridor, the small patch of natural vegetation remaining between the West Hills and the Vaca Mountains (i.e. West Hills–Vaca Mountains corridor), Vallejo Lakes, Rockville Hills and the Jepson Prairie–Suisun Marsh corridor.

CALLIPPE BUTTERFLY NON-PRIORITY CONSERVATION AREAS

Description: Areas in the western and southern portion of the county that contain habitat for callippe butterfly populations. These areas encompass all known occurrences within the county and other areas that contain all habitat conditions necessary to support the following species: johnny jump up plants, adult nectar plants, and ridgeline hilltop topography.

Relevant Policy: Proposed General Plan Policy RS-1 states, “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 essential habitat connections.”

SUISUN MARSH PROTECTION PLAN MANAGEMENT ZONE

Description: The Suisun Marsh is the largest remaining wetland in California. It is located in the southern portion of the county, south of Highway 12, east of I-680 and west of Montezuma, Molena, and Denverton. The wetland is recognized as an area of significant value in terms of the ecosystem services it performs and the biological diversity it contains.

Relevant Policy: In 1974, the California Legislature passed the Suisun Marsh protection act, designed to preserve Suisun Marsh from residential, commercial, and industrial development. The objectives of the Protection Plan are to preserve and enhance the quality and diversity of the Suisun Marsh aquatic and wildlife habitats and to assure retention of upland areas adjacent to the marsh in uses compatible with its protection. The San Francisco Bay Conservation and Development Commission and the Department of Fish and Game work in cooperation with local governments to enforce the act.

OPPORTUNITIES

The constraints described above describe portions of the planning area where development may be limited or restricted by proposed General Plan policies. Each constraint is supported by a proposed General Plan policy and in some cases related state and federal regulations or policies. These constraints are aimed at protecting farmland, water quality, and habitat, will help the community achieve the goal of creating a “Sustainable Solano County.”

The majority of the VBPA is subject to one or more constraints. The largest unconstrained area exists in an area bound by North Gate Road, Canon Road, Peabody Road and Travis Air Force Base. The area provides a significant opportunity for the development of new residential, commercial, and industrial land uses. In addition, the area was identified in the Economic Development background report as a good location for new or expanded

businesses and job creation. The area lies within Fairfield's SOI, thus potential tax revenues may not directly benefit the county if the area were annexed.

Additionally, resource and habitat constraints represent opportunities to protect valued community assets. Protection of biological resources in the South Vacaville Planning Area is a significant opportunity given the valuable ecosystems and rich biodiversity found in the area.

APPENDIX IV – LAND USE DESIGNATION CHANGE PROPOSALS

In addition to the opportunities and constraints mapped and described previously, a number of requests and recommendations were considered in the development of land use alternatives presented to the CAC. These include:

- ▶ Locations for potential new commercial or manufacturing uses, as recommended and identified in the economic development background report.
- ▶ Property owner requests for land use designation changes. These requests were submitted to County staff before December 31, 2006, during a prescribed timeframe authorized by the Board of Supervisors.
- ▶ Recommendations for land use category modifications at specific locations recommended by the Board of Supervisors, County staff, and/or the consultant team.

Table 2 summarizes these requests and recommendations within the VBPA. Figure 3 shows the location of each request. For each request or recommendation, Table 2 and following pages identify which (if any) land use alternatives the request is recommended within, and provides notes and explanations describing the rationale for including or not including the request within one or more land use alternative. Attachment 1 provides additional detail regarding property owner requests within the VBPA.

**Table 4
Land Use Requests and Recommendations in the South Vacaville Planning Area**

Source	Proposal Number	Approx. Acres	Existing Designation	Proposed Designation	Included in Alternatives	Notes
Property Owner Proposal	P8	1.2	Limited Industrial	Limited Industrial	Alternative 2 Alternative 3	County staff is looking at this area and considering policies and procedures for development of this area within the Urban Growth Line that have limited development potential without annexation and urban services.
Staff Proposal	S1		Extensive Agriculture	Marsh	Alternative 2 Alternative 3	The Culligan Ranch was originally planned for residential development by the City of Vallejo. A portion of the area is in Vallejo's SOI. US Fish and Wildlife Service has acquired the Culligan Ranch as part of the Federal San Pablo Bay National

Table 4
Land Use Requests and Recommendations in the South Vacaville Planning Area

Source	Proposal Number	Approx. Acres	Existing Designation	Proposed Designation	Included in Alternatives	Notes
						Wildlife Refuge. The remaining properties are in managed wetlands. The Extensive Agriculture designation does not reflect the character and uses of the area. Consider redesignation of the area to Marsh.
Staff Proposal	S2		Marsh	Marsh (White Slough Specific Plan boundary)	Alternative 2 Alternative 3	This area is subject to the White Slough Specific Plan, and although no designation changes would be needed, the General Plan would incorporate the specific plan boundary. The County would incorporate the plan as a special policy document and defer to it for treatment of this area.
Staff Proposal	S3		Park and Recreation	Residential Low	Alternative 2 Alternative 3	Current Land Use designation came from the Vallejo General Plan. Area located within Urban Growth Line. The area currently receives water, sewer, and fire service from Vallejo agencies. In past, there was interest by some land owners to annex to Vallejo. Conflict between land use designation and existing development pattern and zoning.
Staff Proposal	S4		Community Commercial and Low Density Residential	Neighborhood Commercial and Residential Low or Mixed-Use Commercial/Residential	Alternative 2 Alternative 3	Mix of residential and commercial uses along Benicia Road and single family and duplex uses in remainder of the area. All the residential uses along Benicia Road are non-conforming to zoning. The Community Commercial designation came from the Vallejo General Plan.
Staff Proposal	S5		Residential Low and Commercial Neighborhood	Residential Low and Residential Medium or Residential Low, Residential Medium,	Alternative 2 Alternative 3	There are several larger parcels in the area. Interest has been expressed in the past for the development of higher density projects in the area.

**Table 4
Land Use Requests and Recommendations in the South Vacaville Planning Area**

Source	Proposal Number	Approx. Acres	Existing Designation	Proposed Designation	Included in Alternatives	Notes
				and Mixed-Use Residential/Commercial		Higher density was controversial when proposed under the Homeacres Neighborhood Plan and was not adopted. Consider higher density residential in selected areas in the community.
Staff Proposal	S8		Extensive Agriculture	Open Space (Per City of Benicia)	Alternative 2 Alternative 3	This area has been undergoing study by Benicia for several years. It is now outside the city's urban growth boundary. Recently, the City has been reviewing options to permanently protect this area in open space use.
Staff Proposal	S11		Extensive Agriculture	Tri-City Cooperative Planning Area Overlay	Alternative 2 Alternative 3	This area is subject to the Tri-City and County Cooperative Plan and is to be incorporated into the General Plan as a special policy document.

Source: Solano County 2007

Figure 7: Land Use Proposals