Chapter 5

# CONSTRAINTS AGAINST DEVELOPMENT OF THE EAST SAN RAMON VALLEY AREA

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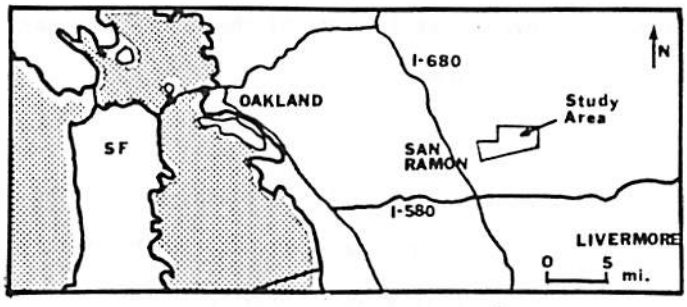
## Introduction

All recent projections have shown that the population of the San Francisco Bay AREa is increasing at a brisk pace; as a result, many non-residential urban and rural areas are being considered by county and city officials and outside investors as potential sites for future development. City, county, and regional planners are faced with the problems of providing places for adequate urban growth while preserving open space and agricultural lands.

The Tassajara region, which is located east of the cities of San Ramon and Danville (Map 1) is a likely target for urban expansion, since it could offer many advantages to its inhabitants as well as generous profits for the developers. According to the San Ramon Valley Area General Plan (SRVAGP), this part of Contra Costa County is considered one of the most desirable places to live in the Bay Area, "because of its scenic beauty, good climate, the suburban charm of its neighborhoods, and proximity to the major employment centers of San Francisco and Oakland" (SRVGPCC, 1977). The population of the valley has increased from about 2,000 in 1940 to about 41,000 in 1975. By 1990, 80,000 people will be residents (Association of Bay Area Governments [ABAG], 1983).




Map 1. Location Map
Source: Contra Costa County Planning Department, 1983.

The Contra Costa County Planning Department (CCCPD) developed the San Ramon Valley Area General Plan in 1977. This document regulates all development along the Camino Tassajara corridor, the major roadway through the region. Because of the hilly topography in the study area, the plan calls for mostly single-family, low-density housing (one to three dwelling units per acre), with agricultural

lands and general open space separating the residential neighborhoods. There is a major problem with this type of development: it could lead to large, sprawling, unconnected urban areas. Consequently, much agricultural land would be lost. However, the County calls for orderly growth throughout the region, and has taken measures, such as rezoning, to protect the open space east of the already developed areas in the near future.

The SRVAGP has been amended several times since 1977, and most of the changes have resulted in the transformation of open space and agricultural land into residential zones. The eastern portion of the county planning region, which is the study area of this report, is designated as open space, but in light of the increasing amount of open land being lost to housing to the west, there is a good chance that the same fate awaits the greenbelt to the east after the year 2000. The purpose of this paper is to analyze the constraints aginst development in this productive and scenic region and to develop a sound argument for preserving the open space for future generations.

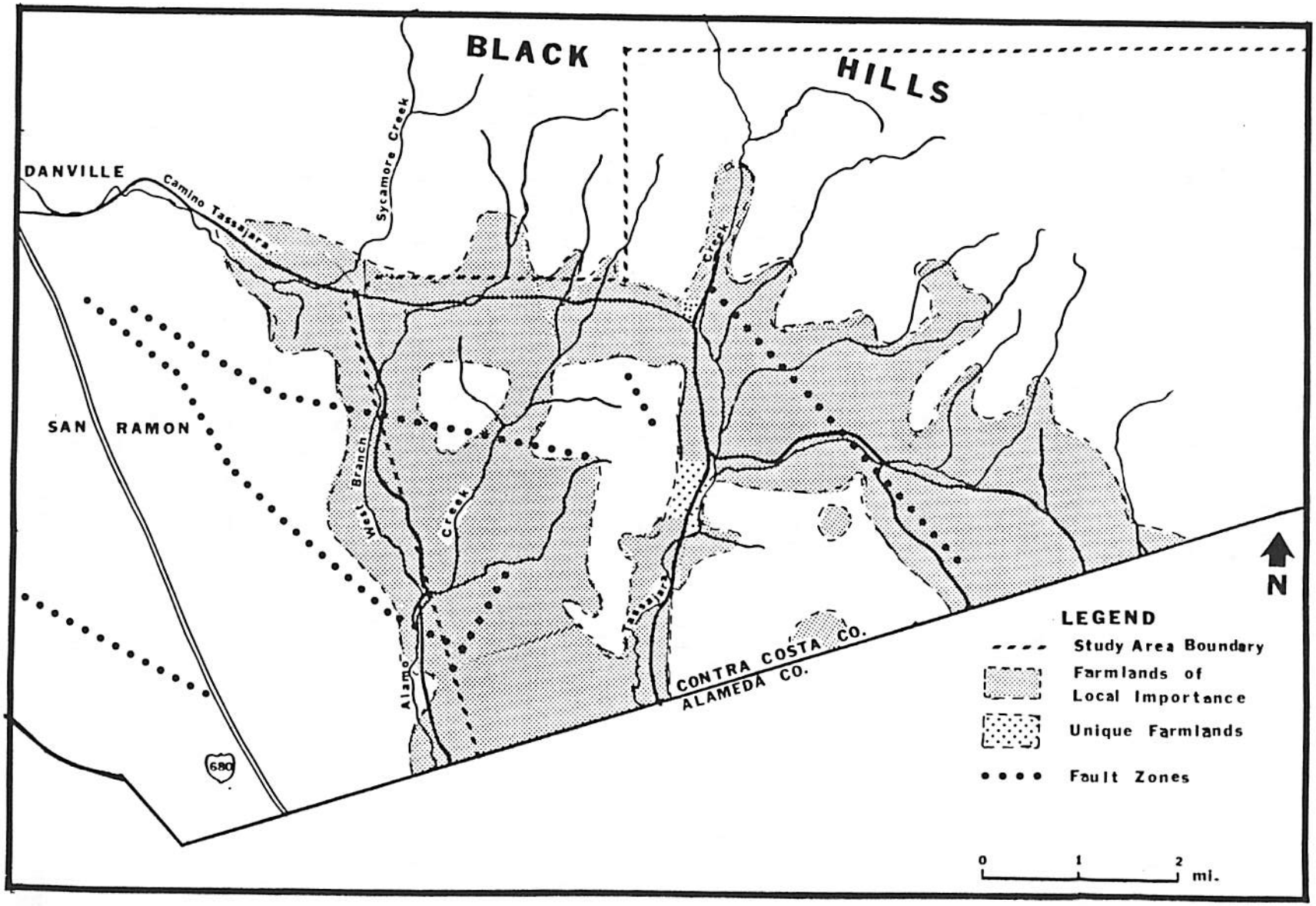
## Methodology

General information about development in the area was obtained from the SRVAGP and from amendments to the plan. Reasons for changes in land use in the western part of the study area were found by reviewing environmental impact reports which were the bases for the decisions made by the county planners and supervisors.

The USDA Soils Survey for Contra Costa County and the Contra Costa Resource Conservation District (CCRCD) provided information on the agricultural value of the land and on stability and drainage problems that may be constraints to development in the area. The format of the data presented in this paper was modeled after EIRs for areas of potential development. Arguments for preservation of the open space are made on the basis of agricultural and environmental values of the land and on physical constraints within the study area which would restrict development.

## Geography and Geology

The Tassajara region has a diverse topography, with alluvial plains and rolling hills with slopes ranging from ten percent to 75 percent. There are three major creeks, which generally flow from north to south: Alamo Creek, Tassajara Creek, and the West Branch. Their paths are partially responsible for carving the canyons and creating the relatively flat and fertile alluvial plains. These waterways, which are often reduced to a trickle during the hot summer months, are supplied by an average annual rainfall of about 18 inches. In addition, the southern portions of the Alamo and Tassajara creeks are 100-year flood zones (Waananen et al., 1977), which suggests that there is a one percent chance of a major flood in any one year. The elevation of the study area ranges from about 450 feet in the west to over 1,300 feet in the east, although there are many valley floors in the east which are well below the 1,300 foot level (USGS, 1973).




Map 2. Faults, Farmlands of Local Importance, and Unique Farmlands
Source: CCRCD, 1979; California Division of Land Resource Protection, 1982.

There are three parent rock formations that underlie the region. The Diablo Formation consists mainly of folded layers of sedimentary rocks and occurs in the northern and eastern part of the study area. To the west lies the Sycamore Formation, which is a tightly folded and faulted combination of claystone, siltstone, sandstone, and conglomerate. The Tassajara Formation, which lies between the Diablo and Sycamore formations, is similar to the Sycamore Formation but contains volcanic rock in occasional layers. All of the hills on these bedrocks are prone to slides, especially those on the Sycamore and Diablo Formations (Destreich, 1958).

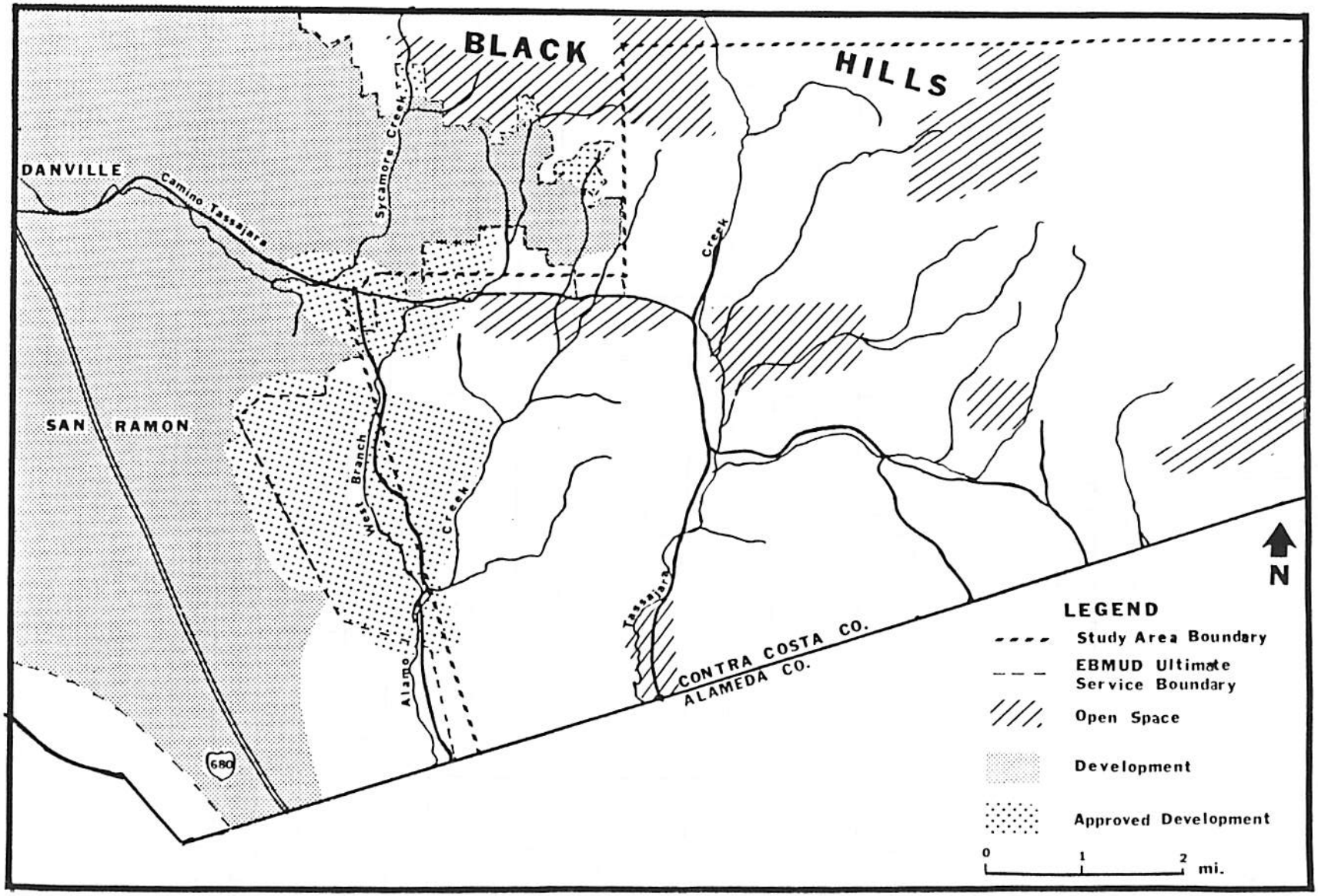
The Calaveras Fault System, Pleasanton Fault, and Diablo Fault System (Map 2) all cut through the area, and seismic activity is not uncommon (California Division of Mines and Geology, 1975). In 1979 and 1980, five earthquakes, ranging in magnitude from 4.8 to 5.9 on the Richter scale, were recorded on the Calaveras Fault. Research by the State Division of Mines and Geology revealed that the study area is in a region of high tectonic activity, and there is the likelihood of considerable seismic activity in the future (CCCPD, 1983).

Agriculture and Soils

Most of the land in the study area is labelled as Agricultural Preserve in the SRVAGP, while the remainder is designated General Open Space (Map 3). Approximately 80 percent of the agricultural area is rangeland used for grazing and pastureland, and 20 percent is operated as cropland (CCRCD, 1979). These percentages closely coincide with the relative areas which have slopes greater and less than 10 percent, respectively. Agricultural Preserve lands are to remain in farming uses under the Williamson Act until the contract with the County expires, which occurs every ten years. Development can occur on these areas only if a cancellation of the contract is granted by the local government.

Between 1970 and 1979, the number of parcels increased from 245 to 411, resulting in 115 new parcels of less than ten acres. In 1981, about 28,500 acres of the Tassajara land were rezoned by the County in order to curb rural residential development. Under the new changes, subdivisions of agricultural parcels are no longer allowed unless variances are granted (Zoning Ordinance 81-40). The new zoning districts are as follows: General Agriculture (A-2); Heavy Agriculture (A-3); Agricultural Districts, 20 acre minimum (A-20); Agricultural Districts, 40 acre minimum (A-40): and Agricultural Districts, 80 acre minimum (A-80). Most of the region is designated A-80, which is most suitable for cattle grazing. These Exclusive Agricultural Districts were created to "provide and protect areas for agricultural uses by preventing the establishment of urban and any other incompatible land uses" (Zoning Code subsection 84-80.204).

Much of the land in the study area is designated "Farmlands of Local Importance" (Map 2) on the Important Farmlands Map for Contra Costa County. These farmland types are not considered to be of national or statewide importance, as are prime farmlands (Reganold, 1978), but they are thought to be suitable for the production of food, feed, fiber and forage crops. In the Tassajara region, they are




Map 3. Development and Open Space in the San Ramon Valley Area
Source: EBMUD, 1985; SRVGPCC, 1977.

typically used for livestock grazing. By definition, the category of Farmlands of Local Importance includes the soil classes I, II, III, and IV (with a slope of less than 30 percent) of the U.S. Soil Conservaton Service's Land Capability Class System (California Division of Land Resource Protection, 1982).

These classes, subdivided into capability units, are useful in determining how the land can be utilized most productively. Class I soils have almost no limitations on cultivation. Soils of classes II through IV have some limitations, while classes V through VII are suited for rangeland and pasture uses. Class VIII soils are not cultivable at all, but are useful for recreation, wildlife, and watersheds (Welch, 1977). In this system the soils are also classified by the factors of erosion hazard, rooting zone limitations, wetness, and climatic limitations.

| SOIL TYPE | CLASS | CODE | SLOPE (%) | DRAINAGE | PERMIABILITY | RUNOFF | EROSION HAZARD | USES |
|---|---|---|---|---|---|---|---|---|
| ALO CLAY | VI | AaF | 30-50 | POOR | SLOW | MODERATE | MODERATE | ALFALFA, RANGE |
| | VII | AaG | 50-75 | MODERATE | MODERATE | MODERATE | HIGH | RANGE |
| BRENTWOOD CLAY LOAM | I | Bb | 0-2 | POOR | SLOW | VERY SLOW | NONE | ROW CROPS. ALFALFA, WALNUTS, BARLEY |
| BOTELLA CLAY LOAM | I | BaA | 0-2 | MODERATE | SLOW | VERY SLOW | SLIGHT | ROW CROPS. ALFALFA WALNUTS, BARLEY |
| CLEAR LAKE CLAY | II | Cc | 0-5 | POOR | SLOW | VERY SLOW | NONE | ORCHARD CROPS. ALFALFA TOMATOES, SUGARBEETS |
| CANEJO CLAY LOAM | I | CeA | 0-2 | MODERATE | SLOW MODERATE | SLOW | NONE | WALNUTS. ALFALFA, SOME ROW CROPS |
| | II | CeB | 2-5 | MODERATE | SLOW MODERATE | SLOW | NONE | WALNUTS, HAY, PASTURE |
| CANEJO CLAY LOAM * | II | ChA | 0-2 | MODERATE | SLOW | SLOW | SLIGHT | ALFALFA, ORCHARDS, PASTURE |
| CROPLEY CLAY | II | CkB | 2-5 | MODERATE | SLOW | SLOW | LOW | BARLEY, HAY, RANGE |
| DIABLO CLAY | III | DdD | 9-15 | GOOD | SLOW | SLOW | SLIGHT | BARLEY, HAY, RANGE |
| | IV | DdE | 15-30 | GOOD | SLOW | MEDIUM | MODERATE | BARLEY, RANGE |
| | VI | DdF | 30-50 | EXCESSIVE | MODERATE | RAPID | HIGH | RANGE |
| LODO CLAY LOAM | VI | LcF | 30-50 | EXCESSIVE | SLOW-RAPID | RAPID | HIGH | RANGE, WATERSHED |
| LOS OSOS CLAY LOAM | VI | LhF | 30-50 | MODERATE | MODERATE | RAPID | HIGH | RANGE |
| MILLSHOLM LOAM | VI | MeF | 30-50 | MODERATE | MODERATE | RAPID | HIGH | RANGE |
| PESCADERO CLAY | VII | Pb | 0-5 | MODERATE | SLOW | SLOW | SLIGHT | IRRIGATED PASTURE BARLEY |

Table 1. Soil Characteristics in the Tassajara Region
Source: Welch, 1977.

Table 1 presents the soils which have been identified in the Tassajara region. Diablo Clay and Clear Lake Clay are the most dominant soil types, with the former covering the hills and the latter covering the valleys. Other soils are found in significant amounts, however. Table 1 contains other important information regarding the agricultural cababilities of the farmland in the study area, including permeability, runoff characteristics, erosion hazards, and present uses.

These soil types are suited for the production of walnuts, almonds, apricots, tomatoes, head lettuce, sugar beets, alfalfa, barley, dryfarmed grains, volunteer hay, range forage, and pasture. The cropland in the study area is mostly used for the production of dryland grains (People for Open Space [POS], 1980). Usually only one-fifth of the available acreage capable of growing barley, wheat, oats, or volunteer hay is utilized at any one time, a practice instituted to curb soil erosion (CCRCD, 1979). Walnut orchards are also operated in the study area (POS, 1980). These farms, however, are classified as Unique Farmlands on the Important Farmlands Map for Contra Costa County. This category is assigned to lands which support one of the forty leading economic crops in California, even though the soil may be of lesser quality than Prime Farm lands. Walnuts, alfalfa, barley, wheat, and tomatoes all fall under this heading and are produced in the Tassajara region.

Vegetation and Wildlife

The vegetation of the Tassajara area consists mostly of grasslands. Most of the native perennial grasses have been replaced by introduced annual grasses. There are scattered oak trees throughout the region, riparian vegetation exists along the creeks, and isolated oak woodland stands and chaparral can still be found. Even though the countryside is not diverse, it is still a valuable habitat for many forms of wildlife (CCCPD, 1978a).

Many animals and birds inhabit the study area, some of which are in danger of local extinction. The burrowing owl (Speotyto canicularia hypuaeca) and the red-legged frog (Rana aurora) have been sighted in the grasslands and are considered to be locally depleted. The Alameda striped racer (Masticophis lateralis euryxanthus) is listed by the state as a rare species and conditions are favorable for its occurrence in the Tassajara grasses. The California tiger salamander (Ambystoma tigrinum californiense) inhabits the grasslands and is thought to be locally depleted by the CCCPD. The habitat along Tassajara Creek and possibly Alamo Creek supports the Northern brown skink (Eumeces gilberti placerencis), which is locally depleted. This animal does not have a high survival rate when in contact with human activity. Finally, the badger (Taxidea taxus), which requires secluded grasslands, is labelled as locally depleted (CCCPD, 1978a).

A survey by the CCCPD has revealed that the rare or endangered plants (as classified by the California Native Plant Society [CNPS] and the federal government [Fed]) shown in Table 2 are also likely to exist in the study area.

| PLANT NAME | STATUS | | RANGE |
|---|---|---|---|
| | CNPS | FEDERAL | |
| Caper-fruited tropidocarpum<br>Tropidocarpum capparidem | RARE BUT NOT ENDANGERED | THREATENED | typically grass near Mt Diablo |
| Diablo helianthella<br>Helianthella casteanea | RARE AND ENDANGERED | THREATENED | entire study area |
| Mt. Diablo manzanita<br>Arctostaphylos auriculata | RARE | ENDANGERED | possibly north study area |

Table 2. Rare and Endangered Plants Found in the Study Area
Source: CCCPD, 1978

Water Supply

The provision of public services will be essential for any development to take place in the Tassajara area. Presently there is no water service, but there are two potential suppliers in the region: the East Bay Municipal Utility District (EBMUD) and the Dublin-San Ramon Services District (DSRSD). The DSRSD operates to the south of the Tassajara area, but cannot supply water to Contra Costa County because of a contract with the State Water Project (SWP). In order for the DSRSD to be permitted to serve the study area, it would have to gain approval from the SWP as well as the Local Agency Formation Committees (LAFCOs) of both Alameda and Contra Costa Counties (EBMUD, 1982).

Tassajara also lies outside of the service area and beyond the ultimate service boundary of EBMUD (Map 3). Changes in this boundary would have to be approved by the State Water Resources Control Board, and the sphere of influence for the District would have to be adjusted by LAFCO. EBMUD has investigated the possibility of extending service into this area because several developments have been proposed, but its current master plan does not include provision of water to the study area (EBMUD, 1985). If EBMUD were to seek to increase its service area, it would probably propose plans to serve much of the Tassajara region, to save on long-term costs (CCPD, 1983). It would be contractually possible for EBMUD to supply water to the area, because it is entitled to water from the American River in addition to the water it already receives from the Mokelumne River watershed. However, additional aqueducts and pipelines would have to be constructed to provide the water from the American River. Not only would this be costly, but EBMUD would become involved in a major environmental battle over the construction of such facilities.

Development and Growth

Development in the area is guided by the SRVAGP, which currently protects the agricultural land in the Tassajara region. Since the plan's adoption in 1977, however, there have been several amendments approved by the Contra Costa County Board of Supervisors which have led to the transformation of

farmland and open space to urban areas. The following changes (Map 3) have converted agricultural preserves into land available for development in or adjacent to the study area: the North Dougherty Hills General Plan Amendment (1983), the West Branch Amendment (1984), the Hansen Lane Amendment (1984), and the Dougherty Road Amendment (1984). Approximately 2,000 acres of farmland will be lost when these areas are fully developed (SRVGPCC, 1977). The land use changes are contiguous with existing urban land and do not conflict with the guidelines of the SRVAGP, which guard against premature and "skip" development. These regions will not be developed prior to 1990 (SRVGPCC, 1977).

All this approved development is in unincorporated areas of the county, which have experienced a 35.5 percent growth between 1978 and 1985 (Contra Costa County Community Development Department, 1986). There has been an increasing demand for housing in the San Ramon Valley due to the arrival of new businesses in the region, and with the development of new industrial parks such as the Hacienda Park, the need for housing is expected to grow. The addition of 1,000 new units has been approved by the county in the Blackhawk area, northwest and adjacent to the Tassajara region, even though many of the existing dwellings are not yet occupied. Such actions by the Board of Supervisors are indicative of the trend of high growth in the San Ramon Valley and Tassajara.

Discussion

The physical constraints against development in the Tassajara area are very limiting; only low- to medium-density housing can be built on the land because of the guidelines in the SRVAGP which do not allow higher housing densities on slopes greater than fifteen percent. Since much of the land falls under this category, a large area would be lost to a relatively small number of dwellings, although large profits for the developers would result. The most easily developed land is that with flat topography, but this is the most productive farmland and the most profitable agriculturally (POS, 1980), and should be protected.

In addition to limiting housing densities, the nature of the sloping hills is hazardous to development in another way: the area is prone to slides due to the bedrock formations and soil types which have been shown to be unstable in character (Destreich, 1958). The soil erosion results from the slow permeability of the soils and steep slopes which can be found throughout the study area (Table 1). The slow permeability increases surface runoff on the steeper inclines, since the water cannot penetrate the surface of the soil layer quickly, which in turn increases erosion and slide danger. However, the permeability does not affect the flatter areas where there is little erosion. Development would only increase runoff by reducing the amount of water-absorbing soil exposed. The presence of natural hazards in the area is not reason enough to prevent development in the region, but it substantially raises the costs of construction and maintenance of structures and roadways.

Seismic hazards exist in the study area as well, and development there must follow the strict guidelines regarding seismic safety set by the County. Fault zones and traces must be located before

building can occur and any structures must be set back at least fifty feet from such areas (SRVGPCC, 1977). More stringent codes apply to buildings erected near fault zones, which again places higher costs on developers.

A strong point in the argument against any type of urbanization in the study area is the need to avoid loss of productive farmland. The climatic conditions and soil types in the Tassajara region are very favorable for grazing and some row crops, as the data have shown. Most of the soils have ratings from class I to IV, and are well suited to cultivation. The surface erosion common to the area can be beneficial for agriculture since it can result in the deposition of materials which form productive alluvial plains along the paths of the major creeks.

Although the land is considered to be productive, the farming operations themselves are not very profitable. Most of the farmland is owned and managed by small, independent farmers (POS, 1980) who may find it attractive to sell off parcels to developers, since the real estate value is greater than the profits gained through agriculture. Residential uses on the parcels would then conflict with the operations of the remaining farmers.

Just as development would encroach upon farming practices, it also would disrupt the habitats of the existing wildlife by displacing the vegetation which provides feeding and nesting sites. The environmental costs of developing the study area could be great. The many different species which are found in the study area depend on the preservation of the open space, and since some of the animal populations are already depleted, their survival may hinge on it.

The lack of water service is another constraint, in terms of both cost and feasibility. If the CCCPD and the LAFCO approved the expansion of EBMUD's service district into the study area, the developers would have to pay for facilities such as pumping stations and pipelines. This raises the infrastructure costs and increases the housing prices. If the County does not allow expansion, then no development will occur. If residential land uses are promoted, then EBMUD and the County would become entangled in a major environmental battle when they try to deliver the American River water.

## Conclusions and Recommendations

The natural hazards, wildlife habitat values, and demonstrated agricultural productivity of the Tassajara region suggest that the land in the study area is best suited to farming and open space uses. Recognizing this suitability, the CCCPD and the Contra Costa Board of Supervisors have taken measures to protect the open space and agricultural preserves in the study area by rezoning the farmlands and rangelands and by rejecting proposals for development which are not consistent with the SRVAGP. As build-out occurs on the presently developable surrounding lands, however, pressure for growth in the Tassajara region will continue to increase. As a result, the County most likely will begin redesignating land uses to meet the housing needs. If this transformation occurs slowly, as has begun to happen in the Crow Canyon Corridor (Map 3), most people probably will not realize that productive farmlands and valuable open space are being lost. Therefore, it is important to begin now to consider the long-

term, cumulative impacts of piecemeal growth in the study area.

Although the SRVAGP presently protects the agriculture and open space in the study area, the County has demonstrated a willingness to make amendments that have undermined such preservation. It should implement policies which will guard against sprawling development. To accomplish this, the Board of Supervisors must amend the General Plan by allowing higher housing densities in areas which are currently labelled as low-density areas and must develop stronger policies to center growth around cities. The County should also adopt strong policies to prevent the provision of water services to the Tassajara region. There is general opposition by residents to high-density housing in or near established low-density neighborhoods (Dingenans, 1975), but the County planners, the Planning Commission, and the Board of Supervisors should not compromise productive farmland and valuable habitat for popularity with self-interested voters. The Tassajara region is a resource that must be protected from urbanization in the future.

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