
White Paper

Goleta Valley Agricultural Viability Analysis

Prepared for
Goleta Valley Chamber of Commerce

July 2006

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White Paper

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Submitted to
Goleta Valley Chamber of Commerce

July 2006

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Executive Summary

The Goleta Valley Chamber of Commerce (Chamber) commissioned this independent, objective survey of agricultural properties in the Goleta Valley. The agricultural consultants were asked to conduct an analysis to determine the economic viability of agricultural use of agricultural parcels. The Chamber is urging the City of Goleta (City) to consider re-zoning any agricultural parcels that are not viable as an agricultural enterprise and consider using them as potential sites to help meet the City's commitment and need to provide affordable housing.

The *Environmental Thresholds and Guidelines Manual* published by the Planning and Development Department, County of Santa Barbara (County), defines agricultural viability on the following basis:

As a general guideline, an agricultural parcel of land should be considered to be viable if it is of sufficient size and capability to support an agricultural enterprise independent of any other parcel. To qualify as agriculturally viable, the area of land in question need only be of sufficient size and/or productive capability to be economically attractive to an agricultural lessee. This productivity standard should take into consideration the cultural practices and leasehold production units in the area, as well as soil type and water availability.

Consequently, crop enterprise studies were conducted based on the assumption that the agricultural parcels in the Goleta Valley are rented by the owner to a skilled farm operator, and the costs and returns are measured from the perspective of the lessee.

The representative crops identified as being agronomically suited to the Goleta Valley with sufficient income to provide potentially adequate returns on the required investment include irrigated lemons, wine grapes, broccoli, avocado, cauliflower, iceberg lettuce, strawberries, raspberries, and blueberries. A summary of the annual estimated farm income, farm costs, and net farm income for these crops, along with dryland, no-till barley, is presented in Table ES-1. The net farm income represents the expected returns to management and risk for the lessee farm operator. In conducting the crop enterprise analysis, it was assumed the crops are grown on irrigable soils with good drainage.

TABLE ES-1
Annual Costs and Returns per Acre for Representative Goleta Valley Crops

Crop	Farm Income (\$)	Farm Costs (\$)	Net Farm Income (Loss) (\$)
Dryland Barley	169	1,532	(1,363)
Irrigated Lemons	5,463	12,558	(7,095)
Irrigated Wine Grapes	6,628	5,447	1,180
Irrigated Fresh Market Broccoli	5,320	8,819	(3,499)

TABLE ES-1
Annual Costs and Returns per Acre for Representative Goleta Valley Crops

Crop	Farm Income (\$)	Farm Costs (\$)	Net Farm Income (Loss) (\$)
Irrigated Organic Broccoli	6,500	9,508	(3,008)
Irrigated Avocado	6,675	6,906	(231)
Irrigated Cauliflower	5,284	8,310	(3,026)
Irrigated Iceberg Lettuce	6,230	9,017	(2,787)
Irrigated Strawberries	34,428	33,262	1,166
Irrigated Raspberries	36,000	31,355	4,645
Irrigated Blueberries	24,354	23,668	686

The parcel owner receives an average annual rent of \$2,222 per acre and provides the on-farm irrigation system. It was assumed that irrigation water is obtained from the Goleta Water District at a cost of \$435 per-acre foot. The Goleta Water District's "New Water Supply" charge of \$26,240 per acre-foot is not included in the farm costs. For parcels with fallow land in need of a new irrigation supply, such as the Couvillion and Bishop Ranch parcels, this would add \$3,813 per acre to the annual farm costs (\$52,480 for 2 acre-feet amortized over a 30-year period at 6 percent interest). Some agricultural parcels in the Goleta Valley obtain irrigation water at a cost of less than \$435 per acre from wells and small reservoirs constructed on creeks.

As shown in Table ES-1, only wine grapes, strawberries, raspberries, and blueberries have a positive net farm income. For parcels needing a new irrigation water supply, only raspberries would have a positive net farm income.

Greenhouses were not included in the analysis. The costs of construction for greenhouses have risen to about \$20 per square foot, and this business is suffering from foreign competition. In addition, approval for the construction of a greenhouse on parcels adjacent to residential areas is unlikely because of the adverse visual effects, early morning noise, need for a large agricultural work force, truck traffic, and other neighborhood disturbances.

There are numerous nurseries in the Goleta Valley that appear to be economically viable. The existing nurseries are adequate to serve local needs so any expansion in production would be to serve markets outside the Valley, which some nurseries already do. However, there are other areas in the County and in neighboring counties better suited to serve these external markets because of lower rent and costs of production, better proximity to agricultural labor and agribusiness services, and more compatible land uses. Therefore, it was assumed that existing nurseries are agriculturally viable, but lessees interested in developing new nurseries would not be attracted to agricultural parcels located in the City of Goleta.

Agricultural land values, estimated at \$25,000 per acre, reflect the income (i.e., farm rent) potential from agricultural use of the land and exclude such considerations as the potential for residential development. The smaller agricultural parcels in the City of Goleta would

likely sell for prices of over \$150,000 per acre as sites for a single residence and hobby farm. However, the cost and returns studies demonstrate that farmland purchased at these prices cannot support economically viable crop enterprises. The studies provide documentation for assertions made by the Farm Advisor (Source: Personal communication with Farm Advisor) and Goleta farm operators that it is not feasible to purchase land at current market prices for agricultural use (Source Goleta Valley Urban Agriculture Newsletter).

The soils in the Goleta Valley vary widely in their suitability for agricultural production. It is likely that a substantial portion of the land designated as agricultural in the City of Goleta's General Plan/Coastal Land Use Plan Draft Environmental Impact Report (DEIR) would be considered non-irrigable under Bureau of Reclamation land classification standards.

The conclusions from this analysis are summarized as follows:

- Using the County of Santa Barbara definition of agricultural viability, the status of a parcel depends primarily upon the ability of the soil to sustain the production of high-value crops, such as berries and nursery products. Traditional citrus and row crops do not generate sufficient net farm income to meet the criteria of being economically attractive to an agricultural lessee.
- Agricultural parcels with good soils and a reliable source of relatively inexpensive irrigation water have a distinct competitive advantage and can be expected to earn net farm incomes that exceed those shown in Table ES-1.
- Agricultural parcels that must pay the "New Water Supply Service" charge would earn net farm incomes less than those shown in Table ES-1. However, they can be viable if they have good soils and focus their cropping pattern on the most profitable crops, such as raspberries and nursery products. Their profit margin is low, so there is a high risk of their viability being jeopardized by increases in farm rent, irrigation water rates, or production costs.
- It is not financially feasible to purchase land in the City of Goleta at current market prices for agricultural use.
- A history of successful irrigation is generally accepted as an indication of the irrigability of soils. Most of the agricultural parcels in the City of Goleta have a long history of continuous crop production, so the irrigability of these soils has been demonstrated. However, in an area well suited to crop production from a climatic viewpoint, failed farming attempts and idle land over a period of several years are strong indicators of soils problems. Credible studies conducted by independent agricultural consultants and laboratories appear to confirm this for some parcels. Consideration should be given to an independent assessment of the irrigability of agricultural parcels in the City of Goleta, focusing primarily on those parcels that are fallow.
- Based on the information available for this preliminary analysis, it appears soils deficiencies are the primary reason for the substantial acreage of fallow agricultural land in the City of Goleta. The Couvillion parcel and a large portion of the Bishop Ranch parcel appear to lack the attributes for agricultural viability.

- Farm rent alone prevents dryland farming from being economically viable.

It is anticipated that a more detailed analysis of individual agricultural properties within the Goleta Valley (within City limits as well as unincorporated Goleta Valley) will be conducted in a second phase of this study.

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1 Annual Costs and Returns per Acre for Representative Goleta Valley Crops

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Crop Enterprise Cost and Return Estimates

SECTION 1

Introduction

The Goleta Valley Chamber of Commerce (Chamber) commissioned this independent, objective survey of agricultural properties in the Goleta Valley. The agricultural consultants were asked to conduct an analysis to determine the economic viability of agricultural use of agricultural parcels. The Chamber is urging the City of Goleta (City) to consider re-zoning any agricultural properties that are not viable as an agricultural enterprise and consider using them as potential sites to help meet the City's commitment and need to provide affordable housing. This White Paper assesses the agricultural viability and economic factors of agricultural properties within the City of Goleta. It is anticipated that a more detailed analysis of agricultural properties within the Goleta Valley (within City limits as well as unincorporated Goleta Valley) will be conducted in a second phase of this study. This White Paper includes:

- A background report on Goleta Valley agriculture, including crops historically and currently grown, and any historic changes affecting crop choice, crop income, and production levels.
- A review of areas currently or historically in agricultural production in the Goleta Valley.
- An analysis of existing and potential agricultural sites in the Goleta Valley.
- A review of resources and infrastructure needed for maintenance and further agricultural development of those properties, such as water, labor, housing, transportation, and pest management.

SECTION 2

Study Approach

The study tasks performed to complete the scope of work for the agricultural viability analysis are as follows:

- Inventory agricultural properties within the City of Goleta.
- Interview selected property owners.
- Conduct interviews with University Cooperative Extension Farm Advisors and other experts with knowledge of Goleta Valley agriculture.
- Gather secondary sources of information on Goleta Valley agriculture from local experts and a search of sources available on the internet.
- Assemble crop enterprise studies prepared by the University of California Cooperative Extension Service for crops determined to be suitable for production on the agricultural properties in the Goleta Valley.
- Update and adapt the crop enterprise studies to agricultural conditions in the Goleta Valley.
- Conduct an analysis of the economic viability of agricultural use of the properties, including a sensitivity analysis to key variables, such as farm rent or land value.
- Prepare a White Paper on the economic viability of agricultural property within the Goleta Valley.

The *Environmental Thresholds and Guidelines Manual* published by the Planning and Development Department, County of Santa Barbara (County), defines agricultural viability on the following basis:

As a general guideline, an agricultural parcel of land should be considered to be viable if it is of sufficient size and capability to support an agricultural enterprise independent of any other parcel. To qualify as agriculturally viable, the area of land in question need only be of sufficient size and/or productive capability to be economically attractive to an agricultural lessee. This productivity standard should take into consideration the cultural practices and leasehold production units in the area, as well as soil type and water availability.

Consequently, the crop enterprise studies presented in a subsequent section of this paper are based on the assumption that the agricultural parcels in the Goleta Valley are rented by the owner to a skilled farm operator, and the costs and returns are measured from the perspective of the lessee.

SECTION 3

Sources of Data

Contacts made to gather the information contained in this White Paper include the University of California Cooperative Extension Service, U.C. Cooperative Extension Farm Advisors in Santa Maria and Ventura, Santa Barbara County Assessor's Office, Santa Barbara County Auditor-Controller Office, Goleta Valley Chamber of Commerce, Goleta Water District, property owners with fallow land, County of Santa Barbara Agricultural Commissioner's Office, California Agricultural Commodity Commissions, and California Agricultural Statistics Service. A list of previous studies and publications used in the analysis is shown in the references section of this White Paper.

The prices received for representative crops used in this analysis are based on historical averages calculated from state prices published by the California Agricultural Statistics Service. Crop production costs are based in large part on crop enterprise studies conducted by the University of California Department of Agricultural and Resource Economics in association with U.C. Cooperative Extension Farm Advisors. Most of the data used to determine cropping patterns and crop yields in the Goleta Valley were gathered from California Agricultural Statistics Service Reports, City of Goleta General Plan/Coastal Land Use Plan Draft Environmental Impact Report (DEIR), University of California Cooperative Extension studies, field observations, and personal interviews of knowledgeable people in the Goleta area. The cropping patterns, crop yields, prices received, and costs of production obtained from the sources noted above were reviewed and tailored to Goleta Valley conditions on the basis of interviews with the Farm Advisors and local farmers and property owners. It is anticipated that the draft crop enterprise studies presented in this White Paper will be refined and validated in more detailed second phase studies, on the basis of further interviews with agricultural experts and a workshop with a representative group of farmers and property owners in the County.

SECTION 4

Goleta Valley Agriculture

The first agricultural enterprises in the Goleta Valley were cattle ranches on land grants made by the Mexican government in the mid-1800s. By the end of the 19th Century, the potential of earning higher incomes from growing tree crops, such as lemons and English walnuts, and row crops was recognized. The large land grant ranches were divided into smaller parcels better suited to more labor-intensive farming operations. The next phase of agricultural development was affected by rapid population growth following World War II, and the associated demand for residential and business property. In recent years, most of the farms in the valley have been replaced by urban development. As farmland has become scarce, the agricultural land values have risen to levels of \$20,000 to over \$30,000 per acre (Source: 2005 Trends in Agricultural Land and Lease Values), making it difficult to maintain the financial viability of farming operations.

4.1 Historical Agricultural Production

Statistics for the County of Santa Barbara indicate the value of gross agricultural production was \$997,601,000 in 2005. The value of agricultural production in the County has risen steadily for decades, increasing to nearly a billion dollars from \$348,169,000 in 1986. The highest value crops at the county level include strawberries (\$202,617,000), wine grapes (\$160,365,000), broccoli (\$112,691,000), head lettuce (\$59,191,000), and cauliflower (\$39,288,000). Significant shifts in agricultural production over the past 5 years have included an increase in the acreage and value of fruit and nut crops to \$415,180,000, an increase in the acreage and value of vegetables to \$348,889,000, and a decrease in the acreage of nursery products, but increase in value to \$169,958,000 (Source: 2005 Agricultural Production Report, Santa Barbara County). The majority of the agricultural land that has converted to other land uses over the 2002-2004 period was Grazing Land (3,854 acres) and Farmland of Local Importance (3,035 acres) (Source: City of Goleta General Plan/Coastal Land Use Plan DEIR).

Agricultural production statistics are not published for the City of Goleta or the Goleta Valley. The Goleta General Plan indicates there are approximately 410 acres of agricultural land within the city limits. High value crops are grown on some of this land, including lemon and avocado orchards, vegetables, and nursery products. More than two-thirds of the agricultural land in the City has been fallow for many years, although some of it has been farmed in the past, growing fruit, walnuts, and vegetables. This substantial acreage of fallow land raises questions about the agricultural viability of farming operations in the Goleta Valley, which prompted this study.

4.2 Existing and Potential Agricultural Sites

The information presented in this section is taken from the City of Goleta General Plan/Coastal Land Use Plan DEIR with minor modifications and some additions.

Descriptions of ten distinct ranches or farms are presented. These descriptions will be updated in the second phase White Paper, and expanded to include other agricultural sites in the Goleta Valley.

According to the Goleta General Plan, the agricultural land within the City includes 67.5 acres of Prime Farmland, 0 acres of Farmland of Statewide Importance, 42.5 acres of Unique Farmland, 163.8 acres of Farmland of Local Importance, and 101.1 acres that have not been designated according to the California Department of Conservation Farmland Mapping and Monitoring Program. The agricultural land within the City includes 73 acres of Class I Soils, 106.9 acres of Class II Soils, 133.6 acres of Class III Soils, 57.8 acres of Class IV Soils, 0 acres of Class V Soils, 13.4 acres of Class VI Soils, 10.3 acres of Class VII Soils, and 13.9 acres of Class VIII Soils.

4.2.1 Bishop Ranch

Bishop Ranch is composed of three parcels located within the City, each under different ownership. The total area is about 290 acres. This represents 71 percent of the agricultural land in the City. It is also the single largest undeveloped area in the City. The property is bounded by Los Carneros Road on the east, Glen Annie Road on the west, Cathedral Oaks to the north, and U.S. Highway 101 on the south. The site is highly visible from all of these major roadways, and offers scenic vistas from numerous locations on the property, as well as across the site to the mountains and ocean.

For many years, Bishop Ranch supported livestock, as well as a wide variety of fruit, vegetable, and nut crops. Remnant walnut trees indicate past uses of the property, which included commercial walnut production, other orchards, and row crops.

Cardio/Pulmo Medical Group owns a 21.8-acre parcel on the northeast side of the site. It contains some well-maintained avocado orchards on a portion of the property. This area contains Prime and Unique Farmland.

The University Exchange Corporation owns the large, 238.8-acre center parcel. This parcel is not presently engaged in agriculture, although part of it was farmed in the past with both row crops and orchards. Cattle were grazed from 1985 to 1990. During the same period, about 10 acres of citrus were planted on the northeast corner of the property and then abandoned. An attempt to grow 5 acres of strawberries in 1985 failed, and 10 acres of Christmas trees planted in 1990 were removed and mulched the same year (Source: Memo to Bishop Ranch by KPM dated August 29, 2002). A historic residence and plantings that are approximately 100 years old are located on the parcel. This area is classified as Farmland of Local Importance. A study conducted by an independent agricultural consultant in 2006 concluded that it is not practical to utilize the property for any type of agricultural production, primarily because (1) most of the soils are “marginally to poorly” suited for deep rooted crops with a high value, such as lemons, and (2) the only source of irrigation water for this property is from the Goleta Water District, which has a large one-time new water supply service charge and annual water rate (Source: Report on the Agricultural Study for Bishop Ranch, June 16, 2006).

The Stow Land Company owns the 30-acre parcel on the eastern side along Los Carneros Road, which is part of the original Stow Family/La Patera Rancho. The Stow Company parcel is actively farmed as a large lemon and avocado orchard. This portion of the site is

classified as Prime Farmland. Both the University Exchange Corporation and the Stow Land Company own acreage planted with avocado and lemon orchards directly across the street on the north side of Cathedral Oaks outside of, but immediately adjacent to, the Goleta city limits.

4.2.2 Fairview Garden Farms

Fairview Garden Farms is an 11.6-acre organic farm located on North Fairview Avenue, one block south of Cathedral Oaks. The farm is surrounded by suburban development on all sides. There also is a produce stand and small gravel parking lot along the Fairview Avenue frontage. The farm contains areas of topsoil up to 30 feet in depth, and produces more than 100 different fruits and vegetables annually. The property has been farmed continuously since 1895 and may be the oldest organic farm in southern California. The property is classified entirely as Unique Farmland.

In 1997, the Center for Urban Agriculture (Center) was formed in response to the Goleta Community Plan designation for the parcel to remain as agricultural for only a few more years. The Center forged an agreement with the Land Trust for Santa Barbara County and purchased the acreage to hold a conservation easement on the property. The easement is a legal agreement between the Center and the Land Trust that guarantees Fairview Gardens will remain a working farm and educational facility in perpetuity. It is the only agricultural acreage in Goleta that is permanently protected with a conservation easement.

4.2.3 Ellwood Canyon Site

The Ellwood Canyon agricultural area is located in the northwest corner of the City of Goleta, just north of Cathedral Oaks Road and east of Winchester Canyon. Ellwood Canyon Road divides several of the parcels. The 31.5-acre area is owned by three different families, the majority of which is the 27 acre Bradley farm. The smaller farms on the other 4.5 acres have orchards and natural vegetation, while the Bradley farm supports both row crops and greenhouse development. The majority of this property is classified as Prime Farmland.

4.2.4 Roman Catholic Archbishops

The approximately 9.4-acre property is owned by the Catholic Church and managed by the Archdiocese of Los Angeles. It is located in northwest Goleta and fronts on Calle Road to the south. It is surrounded on the east and north by single-family homes and on the west by a condominium development. Currently, the property is leased to Goleta farmer, John Lane, who grows various row crops for the local Lane Farms business. The property contains soils classified as both Prime Farmland and Unique Farmland.

4.2.5 Philip

The 6.6-acre Philip parcel is located on Stow Canyon Road, north of the Stow Grove community park tennis courts, south of Cathedral Oaks Road, and west of San Pedro Creek. The property contains an avocado orchard and is surrounded by single-family homes, with the exception of San Pedro Creek to the east. The property is classified entirely as Prime Farmland.

4.2.6 Herold

The Herold property is located just northeast of the intersection of Fairview and Cathedral Oaks Roads, and is composed of several parcels totaling approximately 9.4 acres. The properties contain scattered avocado orchards and several single-family homes. This property is classified entirely as Unique Farmland.

4.2.7 Couvillion

The 15.05-acre Couvillion parcel is located in northwestern Goleta, bordered by Glen Annie Golf Course to the east and north, a drainage/riparian area to the west, and Cathedral Oaks Road to the south. The site was originally part of a 25-acre parcel, which was divided by Cathedral Oaks Road. An attempt was made to grow avocados on the parcel during the period 1987 to 2000. Trees were planted on fertile and well-drained mounds to mitigate drainage and root penetration problems associated with a clay subsoil. The mound system failed in 1995-1996 as the avocado roots hit the clay subsoil, and the orchard was abandoned in 2000. The land is now fallow except for a few trees on the northern end of the parcel, where a steep slope allowed some drainage. The property contains a house and outbuildings, and is classified entirely as Prime Farmland. However, studies conducted by independent agricultural consultants with a soils survey performed by Fruit Grower Laboratory, Inc. concluded there is no profitable agricultural option for this parcel. Poor soils, clay hardpan, and low fertility were cited as severe constraints to the successful cultivation of orchard, vegetable, and fruit crops. The report indicates poor economic returns, high price of entry, and small parcel size preclude successful dryland, orchard, vine, and vegetable crops, or livestock. Further, there would likely be conflicts with urban land uses if an intensive agricultural operation were established on the parcel (Source: Report prepared for the Shelby Family Partnership [Double R Ranch] Property dated June 2006).

4.2.8 Sumida

Located in the eastern portion of Goleta, this 21.2-acre parcel is composed of the La Sumida Nursery and active agricultural uses in the southern and eastern portions of the parcel, avocado trees within the site along the northeast parcel boundary, and fallow agriculture land in the central and northeast portions of the property. The site is relatively flat and is completely surrounded by development. The property is classified entirely as Unique Farmland and contains prime soils.

4.2.9 McPage Enterprises

The 12.2-acre site is located in the southeastern portion of the City of Goleta. The parcel is flat and consists of active agriculture uses. The parcel is bordered to the northwest by a small tributary to the San Jose Creek that supports southern willow scrub habitat. Surrounding land uses also include fallow agriculture to the west and development to the northeast, south, and southwest. The site is not classified as Important Farmland, but contains prime agricultural soils.

4.2.10 Pine Avenue Associates

The site is flat and includes 2.4 acres of fallow agricultural land. The parcel is bordered to the northwest by a small tributary to the San Jose Creek that supports southern willow scrub habitat. Surrounding land uses also include developed lands to the south and active agriculture to the east. The site is not classified as Important Farmland, but contains prime agricultural soils.

4.3 Crop Enterprise Costs and Returns

The representative crops identified as being agronomically suited to the Goleta Valley with sufficient income to provide potentially adequate returns on the required investment include irrigated lemons, wine grapes, broccoli, avocado, cauliflower, iceberg lettuce, strawberries, raspberries, and blueberries. A summary of the annual estimated farm income, farm costs, and net farm income for these crops, along with dryland, no-till barley, is presented in Table 1. The net farm income is measured from the viewpoint of a lessee farm operator, and represents the expected returns to management and risk. In conducting the crop enterprise analysis, it was assumed the crops are grown on irrigable soils with good drainage. More detailed information on the costs and returns is provided in the individual crop enterprise studies in the Appendix to this White Paper.

TABLE 1
Annual Costs and Returns per Acre for Representative Goleta Valley Crops

Crop	Farm Income (\$)	Farm Costs (\$)	Net Farm Income (Loss) (\$)
Dryland Barley	169	1,532	(1,363)
Irrigated Lemons	5,463	12,558	(7,095)
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Irrigated Strawberries	34,428	33,262	1,166
Irrigated Raspberries	36,000	31,355	4,645
Irrigated Blueberries	24,354	23,668	686

The mild climate and fertile soils in the Goleta Valley allow the year-round production of a wide variety of crops. The normal annual rainfall is 16.25 inches (Source: Western Regional Climate Center, Reno, Nevada), so irrigation is necessary for crop production to be financially viable. Some dryland crops, such as grain and pasture, can be grown with this limited amount of rainfall, so a cost and returns study for dryland, no-till barley was performed to demonstrate the viability of farming without irrigation.

The cost and returns studies summarized in Table 1 are based on a typical farming arrangement with the parcel owner leasing the land to a skilled farm operator. The parcel owner receives an average annual rent of \$2,222 per acre and provides the on-farm irrigation system. It was assumed that irrigation water is obtained from the Goleta Water District at a cost of \$435 per acre-foot. The Goleta Water District's "New Water Supply" charge of \$26,240 per acre-foot is not included in the farm costs. For parcels with fallow land in need of a new irrigation supply, such as the Couvillion and Bishop Ranch parcels, this would add \$3,813 per acre to the annual farm costs (\$52,480 for 2 acre-feet amortized over a 30-year period at 6 percent interest). Some agricultural parcels in the Goleta Valley obtain irrigation water at a cost of less than \$435 per acre from wells and small reservoirs constructed on creeks.

As shown in Table 1, only wine grapes, strawberries, raspberries, and blueberries have a positive net farm income. For parcels needing a new irrigation water supply, only raspberries would have a positive net farm income.

Greenhouses were not included in the analysis. The costs of construction for greenhouses have risen to about \$20 per square foot, and this business is suffering from foreign competition. Greenhouse operators who expressed some interest in constructing a facility on the Couvillion parcel have reportedly lost interest. In addition, approval for the construction of a greenhouse on parcels adjacent to residential areas is unlikely because of the adverse visual effects, early morning noise, need for a large agricultural work force, truck traffic, and other neighborhood disturbances.

There are numerous nurseries in the Goleta Valley that appear to be economically viable. Most sell products grown on their parcel at roadside markets, local farmer's markets, and other wholesale and retail nurseries. The existing nurseries are adequate to serve local needs so any expansion in production would be to serve markets outside the Valley, which some nurseries already do. However, there are other areas in the County and in neighboring counties better suited to serve these external markets because of lower rent and costs of production, better proximity to agricultural labor and agribusiness services, and more compatible land uses. Therefore, it was assumed that existing nurseries are agriculturally viable, but lessees interested in developing new nurseries would not be attracted to agricultural parcels located in the City of Goleta.

SECTION 5

Resources and Infrastructure Needs of Agriculture

The resources and infrastructure needs of primary significance for agriculture in the Goleta Valley include land, soils, and irrigation water.

The supply of land suitable for agriculture has dwindled and become more expensive as urban development has resulted in the conversion of farmland to residential and business uses. The typical farming arrangement is for parcel owners to lease their land to farm operators with the skills necessary to manage the complex production and marketing process involved in producing high value crops. The farm rental rate for the better soils well adapted to growing perennial and other crops range from \$3,500 to \$4,000 per acre. Lands with poorer, heavy soils produce lower crop yields and require special management. They rent from \$1,500 to \$2,000 per acre, and are better adapted to the production of annual crops, such as broccoli, lettuce, and tomatoes. The average annual farm rent is about \$2,222 per acre with the owner providing the on-farm irrigation system. As shown in Table 1, only crops producing high gross income can be grown profitably with these farm rental rates.

The agricultural value of land in the Goleta Valley has been estimated as \$25,000 per acre. Agricultural land values reflect the income (i.e., farm rent) potential from agricultural use of the land and exclude such considerations as the potential for residential development or use as a luxury home site and hobby farm. There have been few sales of agricultural property in the area, so it is difficult to determine fair market value. A 200-acre parcel of irrigated land near Camarillo sold recently for \$150,000 per acre (Source: Personal communication with Farm Advisor). The smaller agricultural parcels in the City of Goleta would likely sell for prices of over \$150,000 per acre as sites for a single residence and hobby farm. However, the cost and returns studies demonstrate that farmland purchased at these prices cannot support economically viable crop enterprises. The farm rent associated with a land value of \$150,000 is about \$9,000 per acre. The net farm incomes shown in Table 1 are based on a farm rent of \$2,222 per acre. Increasing the farm rent by \$6,778 (\$9,000 minus \$2,222) would decrease net farm income by roughly the same amount, and none of the representative crops would be economically viable. This documents assertions made by the Farm Advisor (Source: Personal communication) and Goleta farm operators that it is not feasible to purchase land at current market prices for agricultural use (Source: Goleta Valley Urban Agriculture Newsletter).

The soils in the Goleta Valley vary widely in their suitability for agricultural production. The Soils Survey of Santa Barbara County published by the Soil Conservation Service (now Natural Resources Conservation Service or NRCS), U.S. Department of Agriculture, is the primary source of soils information available for the Goleta Valley. The NRCS Soil Survey is a useful starting point for an irrigation suitability land classification study as performed under procedures developed by the Bureau of Reclamation for use in determining the arability and irrigability of land. The lack of an irrigation suitability land classification has led to a trial-and-error approach to agricultural development in the Goleta Valley and some

costly failures. It also has contributed to confusion and controversy over the designation of land as agricultural for planning purposes. It is clear that errors have been made in assigning land to categories using FMMP, the California Farmland and Monitoring Program (Sources: Report on Bishop Ranch, p.1, and Soils Survey, Double R Ranch, p.2). It is likely that a substantial portion of the land designated as agricultural in the City of Goleta's General Plan/Coastal Land Use Plan DEIR would be considered non-irrigable under Bureau of Reclamation land classification standards. Consideration should be given to an independent assessment of the irrigability of agricultural parcels in the City of Goleta, focusing primarily on those parcels that are fallow.

Groundwater was the primary source of irrigation water in the Goleta Valley prior to the completion of the Bradbury Dam and Cachuma Reservoir in 1956. The Cachuma Reservoir, a U.S. Bureau of Reclamation project, was planned to serve irrigation, but the water is commingled with other sources and the share delivered to municipal customers has grown rapidly over the years. The rapid growth in municipal water demands and drought conditions in the 1980s prompted a 25-year moratorium on new water service, which ended in 1997 (Source: Personal communication with Goleta Water District). The manager of the Goleta Water District reports that irrigation water is available now for those willing to pay an initial "New Water Supply" charge of \$26,240 per acre-foot and an annual water charge of \$435 per acre-foot. The initial charge amounts to \$52,480 per acre, based on an irrigation requirement of 2 acre-feet per acre. A major concern to irrigators planning to invest in the establishment of perennial crops, in addition to the high cost of water, is the risk of water shortages and crop damage because municipal uses take priority over agricultural uses during a drought. The Goleta Water District is a State Water Project (SWP) Contractor and their sources of water are the SWP, Cachuma Project, and groundwater. Some of the small, presently irrigated farms in the Goleta Valley obtain water from groundwater. The operator of a nursery in the City indicated they obtain irrigation water from a well 200 feet deep. He said the water has a high level of salinity and minerals, which are harmful to plants, but the problem is manageable. Unfortunately, the groundwater aquifer has been depleted in most areas and the low yield from wells is seasonal and inadequate for irrigation purposes. Some agricultural parcels have water rights on streams, such as Los Carneros Creek, and have constructed small reservoirs for irrigation purposes. Thus, the reliability and cost of an irrigation water supply is a major constraint on the viability of agricultural enterprises in the Goleta Valley, and especially for any new agricultural development dependent upon service from the Goleta Water District.

Farmers can encounter a hostile environment maintaining their farming operations in an urban area. Row crops are particularly troublesome because of the high level of activity with farm equipment, early working hours, and associated tractor noise and dust. The use of pesticides is another concern that can be problematic for the farmer. For example, the Agricultural Commissioner has recently banned the application of agricultural chemicals by helicopter in urban areas, which creates a serious problem for avocado growers needing to spray for thrips. Availability of farm laborers and affordable housing is another problem in urban areas. Many farm laborers in the Goleta area must commute from distant locations, such as Lompoc or Oxnard, because of the lack of nearby affordable housing. Many essential farm services, such as tractor repair, are no longer available in the Goleta area. The infrastructure for agriculture has dwindled as the amount of farmland has declined.

Findings and Next Steps

The key variables in determining agricultural viability in the Goleta Valley include land values and the associated farm rent, irrigation water costs, operating costs, and irrigability of soils. As land values and farm rents have risen, farm operators have adjusted by growing higher valued crops. Farm rent averages \$2,222 per acre and the annual irrigation water charge is about \$870 per acre plus a \$3,813 amortized cost per acre for the new water supply fee. In addition, perennial crops have high establishment costs ranging up to over \$3,000 per year on an amortized basis. Operating costs for frost protection, fertilizer, pesticides, pruning, harvesting, and other cultural operations range from \$2,000 to nearly \$30,000 per acre for the various irrigated crops considered in this study. Of course, prices received and crop yields also are important. Farmers can influence operating costs and crop yields through good management, but have very little influence over the other variables. Farmers owning their land can choose to accept a lower rate of return than other opportunities would afford, unless they are burdened with large mortgage payments. Farm operators who rent their land do not have this option and can lose their lease if the owner decides to sell, or they cannot keep up with rent payments.

The conclusions from this analysis are summarized as follows:

- Using the County of Santa Barbara definition of agricultural viability, the status of a parcel depends primarily upon the ability of the soil to sustain the production of high-value crops, such as berries and nursery products. Traditional citrus and row crops do not generate sufficient net farm income to meet the criteria of being economically attractive to an agricultural lessee.
- Agricultural parcels with good soils and a reliable source of relatively inexpensive irrigation water have a distinct competitive advantage and can be expected to earn net farm incomes that exceed those shown in Table 1.
- Agricultural parcels that must pay the “New Water Supply Service” charge would earn net farm incomes less than those shown in Table 1. However, they can be viable if they have good soils and focus their cropping pattern on the most profitable crops, such as raspberries and nursery products. Their profit margin is low so there is a high risk of their viability being jeopardized by increases in farm rent, irrigation water rates, or production costs.
- It is not financially feasible to purchase land in the City of Goleta at current market prices for agricultural use.
- A history of successful irrigation is generally accepted an indication of the irrigability of soils. Most of the agricultural parcels in the City of Goleta have a long history of continuous crop production, so the irrigability of the soils has been demonstrated. However, in an area well suited to crop production from a climatic viewpoint, failed farming attempts and idle land over a period of several years are strong indicators of

soils problems. Credible studies conducted by independent agricultural consultants and laboratories appear to confirm this for some parcels. Consideration should be given to an independent assessment of the irrigability of agricultural parcels in the City of Goleta, focusing primarily on those parcels that are fallow.

- Based on the information available for this preliminary analysis, it appears soils deficiencies are the primary reason for the substantial acreage of fallow agricultural land in the City of Goleta. The Couvillion parcel and a large portion of the Bishop Ranch parcel appear to lack the attributes for agricultural viability.
- Farm rent alone prevents dryland farming from being economically viable.

It is anticipated that a more detailed analysis of agricultural properties within the Goleta Valley (within City limits as well as unincorporated Goleta Valley) will be conducted in a second phase of this study. The recommended study tasks for the next phase are as follows:

- Conduct a more detailed inventory of agricultural properties within the City of Goleta and the unincorporated Goleta Valley.
- Conduct a review of the soils survey information available for the Goleta Valley and prepare an assessment of the suitability of agricultural parcels for irrigation, focusing primarily on the irrigability of fallow lands with apparent soils deficiencies.
- Conduct additional interviews of people in the community with knowledge of Goleta Valley agriculture and concerns about its future.
- Gather additional secondary sources of information on Goleta Valley agriculture from local experts and a search of sources available on the internet.
- Prepare a questionnaire for use in interviewing property owners and review its content with the Chamber of Commerce.
- Conduct interviews with individual agricultural property owners.
- Conduct a workshop with a representative group of farmers in the Goleta Valley to validate the crop enterprise studies
- Update the analysis of the economic viability of agricultural use of the properties, including a sensitivity analysis to key variables, such as land value.
- Conduct a more detailed assessment of resources and infrastructure needs including water, labor, housing, transportation, pest management, etc.
- Prepare a White Paper summarizing the findings of the second phase analysis and submit it to the Goleta Valley Chamber of Commerce.

SECTION 7

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