Appendix F: Working Lands Planning and Analysis Report

Midpen Staff

Coal Creek Open Space Preserve

Appendix F-1:

Agriculture in the Midpeninsula Regional Open Space District: *Existing Conditions, Trends, Constraints and Opportunities*

Prepared for:

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EXECUTIVE SUMMARY

The purpose of this memo is to document the existing conditions and to identify the trends, constraints and opportunities for agriculture within the Midpeninsula Regional Open Space District. The memo is organized into three main sections: (1) Agricultural Resources and Trends, (2) Agricultural Land Use, Economics and Trends by Sector, and (3) District-wide Issues and Trends. The memo was informed by review of existing plans and studies, analysis of existing data, and interviews with various agricultural experts.

Summary of Findings

Historical Agricultural Land Use

The agricultural lands within the District have a history of producing farm products for the greater Bay Area and beyond for centuries. Notable historical production areas include the southern bayside valley lands – part of the Valley of the Heart's Delight – renowned for its orchards; wine grape production in the bayside foothills; nursery crops first in the baylands and now concentrated around Half Moon Bay; grazing on hillside and coastal grasslands; and vegetable crops along the coastal bluffs.

Agricultural Land Resources and Trends

In 2010, there were 54,484 acres of agricultural land within the District's boundaries (15 % of all land) including: 2,199 acres of Prime Farmland, 145 acres of Farmland of Statewide Importance, 3,006 acres of Unique Farmland, and 733 acres of Farmland of Local Importance, and 8,765 acres of Grazing Lands.

During the last 20 years, there has been a net reduction of 5,013 acres of Farmland in San Mateo and Santa Clara Counties within the District geographic boundaries, which represents a 45% loss of farmland overall and a 21% loss of Prime Farmland. There was a net gain of 2,958 of Grazing Land, most of which was a result of conversion from farmland. Farmland became grazing lands primarily on the coastside, and was converted to urban land uses primarily in Santa Clara County; some farmland also natural land as a result of fallowing.

Agricultural Land Use Regulations

San Mateo and Santa Clara counties and the Coastal Commission have enacted significant land use regulations that protect farmland and established various policies supportive of agriculture. These include the San Mateo County's Planned Agricultural District, which limits subdivision and most non-agricultural uses on prime farmland and most grazing land; the Local Coastal Program, a plan approved by the California Coastal Commission that limits urban development and also establishes policies for agriculture and ecosystem management; the District's Coastside Protection Program, which includes a goal of preserving coastal agricultural land; and various policies in the San Mateo and Santa Clara County general plans. These are important and necessary measures for protecting farmland that also reflect strong political and community support. Their focus is to protect grazing and agriculture land, which helps sustain agriculture; however, they are not otherwise actively involved in enhancing the economic viability of agriculture.

Demographics

- The total number of farms and ranches reported in San Mateo County by the USDA 2007 Ag Census was 329[1]. However, anecdotal reports by interviewees suggest that the farming population is on the decline with the total number in 2013 well under 200[2].
- In the MROSD area of Santa Clara County, there are approximately 20 operators, the majority of whom are wine grape growers. [3]
- Trends in the demographics of San Mateo County farms and ranches largely track trends

[1] 2007 Census of Agriculture
[2] Crowder, Fred and Corshen, Bob. Personal Communication. April/May 2013.
[3] Santa Clara County Agriculture Commissioner's Office data

across the nation: an average age of farmers being close to 60 years old, a preponderance of small farms (with revenues of less than $10,000 per year), and a minority of farmers that claim farming as their primary income.

- The nursery sector has provided a significant number of agricultural jobs in the past, but employment in that sector has declined dramatically in the past several years.

Grazing Sector

- A high percentage (46%) of grazing lands in the District boundaries are owned and/or controlled either by the District itself or by other public agencies and private land trusts. Some ranchers express concern that their viability is in the hands of the District and other public landowners for whom maintaining and enhancing agricultural economic viability is not a top priority.
- There is more demand than supply for grazing lands.
- Additional constraints include lack of processing facilities, fragmentation of grazing lands, and increasing conflicts between wildlife and livestock.
- Given both the growing market demand for ecologically and humanely produced animal products and the recognition on the part of land owners that grazing is an effective land management strategy, there exists significant potential to support goals of both ranchers and conservation organizations.
- New livestock operations, such as goat dairies and pastured poultry, show promise for modest growth.

Crops Sector

- Most vegetable crop production takes place on coastal farmland.
- Over the past decade, the value of crop production has experienced a steep decline (63%) with acreage also declining (22%). Brussels sprouts make up about half of crop values. Diversification of crops will be critical to future viability of industry.
- Fruit production (mainly berries and wine grapes) represents only around 10 percent of overall crop production value. However, over the past decade, fruit production value has increased by 73 percent and fruit acreage by 131 percent.
- Constraints include regulatory burden on farmers, insufficient and uncertain water supply and lack of infrastructure.
- Succession of row crop operations is a key challenge for future viability. While there appears to be some influx of new farmers, they are undertaking small diversified operations rather than taking over the larger, conventional operations. In order for larger properties of crop acreage to be maintained, new operators must be supported.

Nursery Crops and Horticulture

- The nursery crop sector has the key role in San Mateo County's agricultural economy, both through direct sales and also likely through indirect agri-tourism impacts, and represents a considerable percentage (23%) of the land use of crop land.
- The sector is a significant contributor, and likely the largest, to agricultural employment overall.
- The sector has contracted by about 30 percent in terms of production value over the past decade and there is consolidation occurring. The primary vulnerability stems from losses to foreign competition. Additional factors are labor issues and lack of innovation.
- Idle infrastructure might represent an opportunity to be leveraged by crop farmers.

Vineyards

- There is far more demand than supply for wine grape growing ground and opportunities to develop new ground are very limited. This demand belies the fact that conditions are somewhat challenging. The existing vineyards are located on relatively small parcels, in hilly areas, have relatively small yields, and limited water supplies.
- Regulations make it difficult and often prohibitive to establish visitor facilities where the grapes are grown.
- The winery business is having a resurgence, with acreage growing as much as feasible and with wine grape land and wine grapes both increasing considerably in value.
- There is also resurgence in the planting of hobby and backyard vineyards.

Urban Agriculture and Agricultural Education

- Urban agriculture (including school and community gardens) and agricultural education programs contribute to local food access and create public awareness about agriculture and local food systems.
- In San Jose, and likely in other communities, the demand for plots in community gardens exceeds supply.
- Existing agricultural education facilities cannot meet demand for programs, primarily due to funding constraints.

Summary of Findings by Issue Area

The findings above are extrapolated primarily from the sections in the memo about the various production sectors. The findings below are summarized in terms of issue areas.

Regulation

- Regulatory/permitting requirements are numerous, complex, overly restrictive, sometimes contradictory, and sometimes unreasonable.
- There is strong appreciation for the creation of the new ombudsperson position that will help address some aspects of this issue.

Water Supply

- Water, including access to water and water supply reliability are a big challenge, especially given increasing demand for limited and uncertain supply.

Labor

- There is virtually no farm labor pool on the coast primarily to the high cost of living and lack of affordable housing for farm employees.

Public Education

- There is a need to create greater public awareness about local agriculture, including about its contributions, resources, about what farmers face, and about what is needed to keep agriculture properties in agricultural use.

Collaboration among Key Stakeholders

- More cooperation and collaboration is needed among key stakeholders and potential partners.
- A long-term vision is needed that includes strategies for both the conservation of farmland and the enhancement of the economic viability of agriculture, that integrates goals for agriculture with open space and community livability goals, and that is linked with regional sustainability planning.

Farmland Preservation Tools and Land Costs

- 'Gentleman farmers' who have outside incomes can drive up cost of land and make it unaffordable for farmers and ranchers trying to make a livelihood.

Agricultural Viability

- The economic viability of agriculture has numerous aspects, many of which are outlined above and some of which are governed by drivers well beyond local control. A holistic, systematic and long-term approach is needed and would start with an overall consensus vision for agriculture in the District.

Throughout this memo are sector-specific points about next steps for analysis and data gaps.

PART 1. AGRICULTURAL RESOURCES AND TRENDS

1.1 Historical Agricultural Land Use

San Mateo County

The agricultural history of the San Francisco Peninsula dates back to the Mission era in the late 18th century. The padres introduced many kinds of orchard crops as well as cattle, horses, oxen, sheep and goats into the lands around the missions. During the rancho period that followed and lasted to the mid-19th century, production of hides and tallow from cattle raised on large tracts of land was the primary agricultural activity. Over the next century the deep fertile soils, moderate climate and plentiful water of the bayside of the peninsula proved to be well suited for many types of agricultural production: grain, and forage crops, orchard and row crops, and nursery products. On the coastal bluffs, crop production complemented the thriving fishing business that centered around Half Moon Bay. Horticultural production, which has been the leading agricultural product in the county for well over 100 years, gradually moved its locus of production from the Bay side to the coast during the middle of the 20th century, as the coastal plains were urbanized.

In connection with the opening of a new exhibit entitled *Plowing Ahead: Historic Peninsula Farming* which opened on March 13th at the San Mateo History Museum, San Mateo County Historical Association president Mitch Postel shares that "San Mateo County was the original bread basket for San Francisco", and evidently beyond. This is evidenced by some key facts:[4]

- According to the 1880 U.S. Census, more than 10 percent of the 8,700 residents owned or leased their own farms. Sunset Magazine was begun around this time as pamphlet published by the railroad company, also a major land holder, and early issues were filled with ads for small farms for sale.
- The first commercial planting of artichokes in California took place just north of Half Moon Bay in the 1890s.
- San Mateo County farmers were among the first farmers in the state to grow Brussels sprouts for market, starting in 1909.
- The Weeks Poultry Colony, also known as the Runnymede Little Farms Colony, was a utopian agricultural community located in East Palo Alto that was made up of 600 1-acre long lots for small –scale homesteaders. In the 1920's and 30's many of these long lots and chicken houses got repurposed for horticultural production.
- Horticultural products helped bring international prominence. Just after World War II, *Acres of Orchids* was considered the largest orchid grower in the world at the time.

Santa Clara County

The agricultural land in Santa Clara County that is within the District was historically divided between the valley floor which supported orchards as well as other agricultural products, and the mountains which have been managed forest or grazing lands.. The valley area was part of the rich Santa Clara Valley which extended from around Palo Alto down to around Morgan Hill, and was known as the *Valley of the Heart's Delight* due to the beauty of vast expanse of blossoming orchards in springtime. Viticulture has also been important in the foothills. Though the wine grape growing area has contracted over time due to urbanization, today the vineyards that remain along with small new plantings are enjoying a successful resurgence.

[4] "Exhibit explores county's connection to farming." The Daily Journal, http://archives.smdailyjournal.com/article_preview.php?id=1766419&title=Exhibit%20explores%20county%C3%A2%EF%BF%BD%E2%84%A2s%20history%20of%20farming, accessed March 15, 2013.

1.2 Agricultural Land Resources and Trends

The following section covers land use and land use conversion trends and land use regulations including current issues.

Land Use and Land Conversion Trends

In 2010, the District's boundaries contained 54,484 acres of Agricultural Land, which is approximately 15 percent of all land within the jurisdiction (Table 1[5]). Of the total 54,484 acres of agricultural land, the 6,083 acres (11%) of cultivated farmland includes 2,199 acres of Prime Farmland, 145 acres of Farmland of Statewide Importance, 3,006 acres of Unique Farmland, and 733 acres of Farmland of Local Importance. There are 48,765 acres of Grazing Lands, which represent ~89% of all agricultural land (DOC 2010).

Table 1: Land cover (acres) within the three counties within the MROSD District and Sphere (FMMP 1990, 2010)

		2010				Change:1990- 2010	
Land Cover Types	**Total 1990**	**San Mateo**	**Santa Clara**	**Santa Cruz**	**Total 2010**	**%**	**acres**
Prime Farmland	2,778	2,180	19	0	2,199	-21%	-579
Farmland of Statewide Importance	219	145	0	0	145	-34%	-74
Farmland of Local Importance	2,880	2,225	779	1	3,006	4%	126
Unique Farmland	5,220	689	32	12	733	-86%	-4,487
Subtotal: All Farmland	**11,096**	**5,240**	**831**	**13**	**6,083**	**-45%**	**-5,013**
Grazing Land	45,807	48,335	430	0	48,765	6%	-2,958
Subtotal: All Agricultural Land	**56,903**	**53,575**	**1,261**	**13**	**54,848**	**-4%**	**-2,055**
Water	17,740	14,676	3,221	0	17,897	1%	157
Other Land	204,431	128,592	73,115	1,873	203,580	0%	-851
Urban and Built Up	90,506	28,994	64,247	15	93,255	3%	2,749
Grand Total	**369,581**	**225,837**	**141,844**	**1,900**	**369,581**	**0%**	**0**

During the last 20 years, there has been a net reduction of 5,013 acres of Farmland within the District's jurisdiction, which represents a 45% loss of farmland overall and a 21% loss of Prime Farmland. There was a net gain of 2,958 of Grazing Land, most of which was a result of conversion from Farmland. Table 2 demonstrates these changes by County in terms of Agricultural Land Classification (DOC 2010). Table 3 shows these changes over in two-year increments over 20 years in San Mateo County only.

[5] Provided by Jodi McGraw

Table 2: Acres of land in areas that changed types between 1990 and 2010 (FMMP 1990 and 2010)

	2010 Land Cover										
	Cultivated Land					Non-cultivated land					Grand Total
1990 Land Cover	Prime	State wide Import-ance	Local Import-ance	Unique	All Farm land	Grazing	Other Land	Urban/ Built Up	Water	All non-cultivat ed land	
Prime Farmland		12	9	338	360	384	443	314		1,142	1,502
Farmland of Statewide Importance	38			25	63	17	73			90	152
Farmland of Local Importance	103	14		325	443	3,081	993	292		4,366	4,809
Unique Farmland	334	27	13		374	565	666	28		1,259	1,633
All Farmland	**475**	**54**	**22**	**688**	**1,240**	**4,047**	**2,175**	**635**		**6,857**	**8,096**
Grazing	53	5	204	353	614		624	151	6	781	1,395
Other Land	336	20	96	531	983	244		4,491	182	4,916	5,899
Urban and Built-up Land	60			188	247	62	2,147		75	2,283	2,531
Water							102	3		106	106
Non-farmland	**448**	**25**	**300**	**1,071**	**1,844**	**306**	**2,873**	**4,645**	**262**	**8,086**	**9,930**
Total	**923**	**79**	**323**	**1,759**	**3,084**	**4,353**	**5,048**	**5,279**	**262**	**14,942**	**18,026**

The details about where these changes occurred are described in the J McGraw 5/15/13 Memo with accompanying maps. The primary reasons for the loss of farmland are dependent on location and include:

- Change in agricultural land use from dry-land farming or hay production to grazing lands, including in areas with sloped terrain or that lost access to a water supply.
- Conversion to urban land uses, primarily in Santa Clara County near Sunnyvale and Mountain View
- Conversion to natural land cover types including riparian habitat, by both public and private land owners.

Of the 54,857 acres of all Agricultural Lands within the District's jurisdiction, the MROSD owns 8,227 acres of grazing lands (17% of all District Grazing Lands), has full or partial easements over another 317 acres of grazing lands, and owns 113 acres of Farmland including 32 acres of Prime Farmland (2% of all District Farmlands). Effective November 1, 2013, the District we reintroduced cattle to approximately 2,000 acres of grazing land with the McDonald area of La Honda Creek Open Space Preserve, which has not been grazed for over 15 years.

Table 3: San Mateo County 1990-2010 Land Use Summary (FMMP 1990 and 2010)

LAND USE CATEGORY	ACREAGE BY CATEGORY (1)						1990-2012 NET ACRE	AVG ANNUAL ACRE CHG	% change
	1990 (2)	1994	1998	2002 (3)	2006	2010			
Prime Farmland	2,381	2,404	2,644	2,624	2,356	2,180	-236	-12	-10%
Farmland of Statewide Importance	219	198	177	205	185	146	-52	-3	-24%
Unique Farmland	2,443	2,621	2,963	2,656	2,387	2,271	-374	-19	-15%
Farmland of Local Importance	4,126	4,030	3,933	3,518	3,496	695	-3,399	-170	-82%
Important Farmland Subtotal	**9,169**	**9,253**	**9,717**	**9,003**	**8,424**	**5,292**	**-4,061**	**-203**	**-44%**
Grazing Land	46,060	45,777	45,750	45,888	46,293	48,797	2,987	149	6%
Agricultural Land Subtotal	**55,229**	**55,030**	**55,467**	**54,891**	**54,717**	**54,089**	**-1,074**	**-54**	**-2%**
Urban and Built-Up Land	69,528	70,135	70,830	71,160	71,691	72,510	2,814	141	4%
Other Land	163,010	162,601	161,418	161,664	161,309	161,119	-1,788	-89	-1%
Water Area	65,684	65,684	65,735	65,734	65,734	65,734	50	3	0%
Total Area Inventoried	**353,451**	**353,450**	**353,450**	**353,449**	**353,451**	**353,452**	**2**	**0**	**0%**

(1) Figures are generated from the most current version of the GIS data. Files dating from 1984 through 1992 were reprocessed with a standardized county line in the Albers Equal Area projection, and other boundary improvements.

(2) Total area inventoried increased in 1990 upon completion of Eastern San Mateo Area soil survey. See other worksheet for older data.

(3) Due to the incorporation of digital soil survey data (SSURGO) during this update, acreages for farmland, grazing and other land use in the categories may differ from those published in the 2000-2002 California Farmland Conversion Report.

In addition to MROSD, private land trusts and other public entities own or protect with easements an additional 13,677 of Grazing Lands (28% of all Grazing Lands) and an additional 2,396 acres of farmland (39% of all farmland). Of these entities, the two with the most significant Agricultural Lands holdings are the Peninsula Open Space Trust (POST) and the California Department of Parks and Recreation.

Table 4: Acres of Agricultural Land Protected

	Total	MROSD Fee Title and Conservation Easements	Non-MROSD Fee Title and Conservation Easements	Protected Lands	Unprotected Lands	Percentage Protected
Prime Farmland	2,198	32	919	951	1,247	43%
F.Statewide Importance	145	1	52	53	92	37%
Unique Farmland	3,042	80	1,062	1,142	1,900	38%
F. Local Importance	754	0	363	363	391	48%
All Farmland	**6,139**	**113**	**2,396**	**2,509**	**3,630**	41%
Grazing Land	48,765	8,534	13,677	22,211	26,554	46%
Total	**54,904**	**8,647**	**16,073**	**24,720**	**30,184**	**45%**

Of the 5,012 net acres of Farmland removed from production, 2,009 acres that changed from cultivated to uncultivated status are managed by conservation agencies. For location of these lands, see the MROSD Agricultural Resources map, Appendix A.

Table 5: Protected Farmland Removed from Production between 1990 and 2010

			Protected			
Farmland Type	Removed Total Acres	Unprotected Acres	Fee Acres	Easement Acres	Total Acres	Percent of total
Prime Farmland	1,142	925	137	80	217	19%
F. Statewide Importance	90	33	57	0	57	64%
Unique Farmland	1,259	889	370	0	370	29%
F.Local Importance	4,366	3,001	1,365	0	1,365	31%
All Farmland	**6,857**	**4,848**	**1,929**	**80**	**2,009**	

1.3 Summary of Findings on Land Use Regulation

Overview

Land use regulation in unincorporated coastal areas of San Mateo County, the location for most of the nursery, floriculture, cropland, and grazing land, is strongly protective of agriculture[6]. Much of this area is included in a Planned Agricultural District (Appendix B), which limits subdivision and most non-agricultural uses on prime farmland (which includes much grazing land). The area generally west of the Santa Cruz Mountains is also subject to the Local Coastal Program, a plan approved by the California Coastal Commission that limits urban development and also establishes policies for agriculture and ecosystem management. The small number of jobs in the coastal area and the lack of freeway access also reduce development pressure.

The District's Coastside Protection Program was initiated in 2004 as a result of the extension of the District's boundary to the Pacific Ocean and the annexation within the District of San Mateo coastal lands. One of the five program goals is to: "Preserve the coastside's precious agricultural land by creating partnerships with local farmers - or agricultural trusts - which would financially support farmers so that they can continue farming while guaranteeing the community that the land will remain undeveloped." The other goals are to "preserve the rural heritage and scenic beauty of the San Mateo coast, open coastland previously closed to the public, create democratic representation and accountability, and bring much-needed services to the coastside.7 The Program aims to protect 11,800 acres of the coastside as open space and agricultural land over the 15 years following its inception (i.e. from 2004 to 2019).

Santa Clara County is also supportive of agriculture. The Santa Clara County General Plan (1995-2010) recognizes that agriculture plays several key roles in the county. These roles are that agriculture:

[6] Applicable sections of San Mateo County Zoning Regulations (1999) include: Chapter 10. "A-1" Districts (Agricultural Districts); Chapter 11. "A-2" Districts (Exclusive Agricultural Districts); Chapter 12> "A-3" Districts (Floricultural Districts); Chapter 12.5 "COSC" District (Community Open Space Conservation District); Chapter 20-A RM Districts (Resource Management District); Chapter 21A "PAD" (Planned Agricultural District)

[7] http://www.openspace.org/plans_projects/cpp.asp

- Remains a fundamental part of the region's economy;
- Provides a locally-grown supply of food;
- Provides a scenic relief from continuous urban development.

In order to confront various challenges to the economic viability of agriculture and to preserve the remaining supply of farmland, the General Plan sets of a number of strategies, policies and implementation measures. These include Agricultural & Agricultural Resources Strategy #2 - Maintain Stable Long Range Land Use Patterns, and Strategy #3 – Enhance the Long Term Economic Viability of Agriculture. A new Health Element is the first element to be addressed for the updated Santa Clara General Plan. The Community Health Existing Conditions Report (May 2013)[8] includes a section on Food Systems, with subsections on Access to Healthy Foods, Food Security and Food Assistance, and Local Food Production.

Despite protections and supportive policies, the amount of San Mateo County cropland in production shrank 42 percent from 1990 to 2010 and the amount of cropland in production within the District area in Santa Clara County shrank by 59 percent[9]. The cropland reduction in San Mateo County constituted the largest drop by percentage in this category among Bay Area counties, according to *Sustaining Our Agricultural Bounty* (March 2011, American Farmland Trust, Greenbelt Alliance, SAGE).

Key Finding

In the District, there are various land use regulations that protect farmland and various policies supportive of agriculture. While these are important and necessary, they are not sufficient, for achieving the purpose of enhancing the economic viability of agriculture.

Next Steps for Analysis and Data Gaps

- Investigate whether land use designations support location and operation of processing, distribution and marketing facilities and the location of worker housing that are all needed to support agriculture.
- Mapping change of land use or permits granted or lapsed for agricultural support services such as food and flower processing, distribution, retailing of agricultural equipment and direct-to-consumer marketing of agricultural products could reveal trends.
- Investigate the causal relationships between the changing proportions of land devoted to timber, grazing, cropland, and nursery/floriculture and changing land prices and changing water supply.

1.4 Demographics

Overview

This section primarily covers the demographics for San Mateo County agriculture, and includes data on numbers of farmers, average age, ethnicity and farm scale. The data in this section comes from the USDA 2007 Census of Agriculture. It is important to note that before 2002, the Census of Agriculture collected detailed demographic data on only one operator per farm. Since 2002, the census has taken a more comprehensive approach, counting all operators and collecting detailed demographic information on up to three operators per farm. The principal operator is the person in charge of day-to-day decisions for the farm or ranch. For the purposes of this study, the principal operator has been used since it best approximates the "farmer" or "owner".

Key Findings

- The total number of farms and ranches reported in San Mateo County by the USDA 2007 Ag Census was 329[10]. However, anecdotal reports by interviewees suggest that

[8] http://www.sccgov.org/sites/planning/PlansPrograms/GeneralPlan/Health/Pages/HealthElement.aspx

[9] Data provided by Jodi McGraw.

[10] 2007 Census of Agriculture

the farming population is on the decline with the total number in 2013 well under 200[11].

- In the MROSD area of Santa Clara County, there are approximately 20 operators, the majority of whom are wine grape growers. [12]
- Trends in the demographics of San Mateo County farms and ranches largely track trends across the nation: an average age of farmers being close to 60 years old, a preponderance of small farms (with revenues of less than $10,000 per year), and a minority of farmers that claim farming as their primary income.
- The nursery sector has provided a significant number of agricultural jobs in the past, but employment in that sector has declined dramatically in the past several years.

Number of Farmers and Ranchers

There may be a definitional issue causing the discrepancy between the number farms and ranches reported in San Mateo County by the USDA 2007 Ag Census (329) and the number suggested by interviewees (under 200). USDA defines a farm as "any place from which $1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the year." This definition will include non-commercial operations, while the farms that report to the agricultural commissioner do not include non-commercial operations. Thus the difference between the two figures is likely the result of how a farm is defined. Verification will need to wait until the USDA 2012 Census of Agriculture is released in late 2013.

Age

Trends in the demographics of San Mateo County farms and ranches largely track trends across the nation with a few notable exceptions. One of the most significant demographic challenges that the agricultural sector faces nationally is also an issue in San Mateo County. In San Mateo County the average age of farmers is 58.4 years, which is above the 57.1 figure nationally. There are many drivers of this phenomenon that will not be discussed here.

Farmers are not entering the profession at a sufficient rate to replace themselves. Succession planning for the transfer of land assets is not the only critical action needed to facilitate new farmers and ranchers entering the profession. As stated by interviewees, a viable agricultural economy is a necessary prerequisite to attracting new farmers and ranchers.

Diversity

Racial and ethnic diversity of farmers and ranchers has been on the rise nationally, and San Mateo County is no exception. In California, the percentage of Asian and Hispanic producers is higher than the national figures. This is relevant to the District's efforts to support agricultural viability in that any programs should be accessible and culturally-appropriate for the diversity represented in San Mateo County agriculture.

Farming as Lifestyle

As is the case with most farms in the United States, San Mateo County farms tend to be small, with 55 percent of all farms reporting less than $10,000 in sales of agricultural products. The figure nationally is 60 percent. Of the 2.2 million farms nationwide, only 1 million show positive net cash income from the farm operation. While this factor for San Mateo County was not studied for this report, similar trends should be expected as those found nationally. One way to corroborate this assumption about the applicability of national data, is to consider the numbers for San Mateo County related to percentage of operators claiming farming as their primary profession (41%) and the percentage that work more than half the year off-farm (45%); many ranchers and farmers work other jobs to subsidize their agricultural income.

[11] Crowder, Fred and Corshen, Bob. Personal Communication. April/May 2013.
[12] Santa Clara County Agriculture Commissioner's Office data

Table 6: San Mateo County Demographic Data (2007 Census of Agriculture)

Characteristic	San Mateo County 2007	U.S. 2007
Number of principal operators	329	2.2 Million
Average age of operator	58.4	57.1
% farms with sales > $10,000	55%	60%
% men as principal operator	74%	86%
% White principal operators	91.50%	96%
% Black principal operators	0.90%	1.40%
% Asian principal operators	5%	0.50%
% Hispanic principal operators	6%	2.50%
% land owned by operator*	?	62%
% principal operators that claim farming as primary occupation	41%	45%
% principal operators working off-farm for more than half of year	45%	41%
% certified organic farms	5.70%	0.60%
# of certified organic farms	19	14,540
% organic acreage	0.30%	0.4%
organic acreage	180	4,077,337
% certified organic sales	0.01%	1%
Farms with 1-9 acres	111 (34%)	10.5%
Farms with 10-49 acres	101 (31 %)	28%
Farms with 50-179 acres	66 (20%)	30%
Farms with 180-499 acres	26 (8%)	17%
Farms with 500-999 acres	11 (3%)	7%
Farms with 1,000 or more acres	14 (4%)	8%

* Unknown for San Mateo County

These figures are similar to the national data in which 1.2 million farms depend on non-farm income to cover farm expenses, while the same number, 1.2 million, report something other than farming as their primary occupation. Clearly these are characteristics and trends that are deep-seeded in the evolution of the agricultural sector nationally.

The motivations and decision-making criteria utilized by commercial vs. non-commercial operators of agricultural operations and lands differ. Given the significant number of farmers that depend on off-farm incomes it can be difficult to distinguish between commercial and non-commercial operations. It will be important to consider these factors when identifying mechanisms to support agricultural viability in San Mateo County. (See Table 6.)

Land Ownership

Nationally, more than 60 percent of land used in agriculture is owned by the operator. The figure for California is similar. The figure for San Mateo County is a data gap, that is worth researching as part of the Vision Process. Non-operator landowners tend to participate less in USDA conservation programs[13]. Ownership and tenure are key determinants of decision-making criteria

[13] Trends in U.S. Farmland Values and Ownership. USDA, March 2012. http://www.ers.usda.gov/media/377487/eib92_2_.pdf , accessed May 30, 2013.

for farmers and ranchers. Whether the interest is acquisition, an easement, or the probability of conservation practices being implemented, this information will be valuable for the District to have.

Government Payments

According to the 2007 Ag Census government payments to San Mateo County farmers and ranchers total $25,000. This figure is well below the national average and is an indication that the type of agriculture practiced here does not qualify for most agricultural support programs, such as commodity payments and the larger conservation programs such as Conservation and Wetlands Reserve Programs. NRCS District Conservationist Jim Howard reports that the $25,000 figure does not include conservation cost-share programs such as Environmental Quality Incentives Program. [14] This will be important information to consider since these programs can play an important role in incentivizing good land management practices, while also covering part of the cost.

Employment Data

The economic impact study commissioned by the San Mateo County Agricultural Commissioner, and expected to be completed in summer 2013, will include data on the "Employment Effects" of the industry. Specifically, it will include total employment by farm production sector, and distinguish between direct, indirect, and induced employment. The report' s findings will help to flesh out the full picture of existing agricultural conditions in the county since trends in agricultural employment are an important indicator of the health of the agricultural economy.

According to the California Employment Development Department (EDD), in San Mateo County there were 1,600 people employed in the "Total Farm" category in 2011[15]. The data just for the City of Half Moon Bay for the 2010 Fiscal Year (ending on June 30),[16] indicate that nursery businesses were some of the top employers in the City as well as a significant source of agricultural employment in the county. Nurseryman's Exchange[17] reported 400 employees and was ranked as the second largest employer in the City. Bay City Flowers reported 340 employees and was ranked as the third largest employer in the City. The same City of Half Moon Bay report for the 2012 Fiscal Year[18] indicates that the employment contribution by the nursery sector appears to have shrunk significantly. The only agricultural employer listed on the top-10 employer list was Nurserymen's Exchange with a total of 140 employees.

Next Steps for Analysis and Data Gaps

Given the discrepancy concerning total number of San Mateo County farmers and ranchers, it is important to understand whether the underlying reason is a reduction in the number of commercial operators and/or a difference in reporting methodologies.

More fundamentally, it is important to know more about each and every one of the County's relatively small and aging farming population. Long-term farmers and ranchers hold deep knowledge of the land and its capabilities and are therefore a critical agricultural resource for shaping the viability of agriculture into the future. Similarly, it is important to track each new farmer and to understand the drivers underlying the success of some of these new farmers and why, as one interview reports, there is high turn-over among new entry farmers. More detailed knowledge about the farming population (e.g. cultural diversity, tenure, reliance on outside

[14] Data from local NRCS office is pending.
[15] http://www.labormarketinfo.edd.ca.gov/

[16] City of Half Moon Bay California Comprehensive Annual Financial Report Fiscal year ended June 30, 2010.
[17] Sold to in 2012, and now operated as, Rocket Farms, as one of their several facilities nationally.
[18] City of Half Moon Bay California Comprehensive Annual Financial Report Fiscal year ended June 30, 2012.

income, success factor, etc.) can help make policies and strategies aimed at enhancing agricultural viability, more effective and better targeted.

It will be helpful to have a better understanding about the utilization of USDA funding and cost share programs in the county, and whether there may be barriers in the way and opportunities for increasing utilization.

PART 2. AGRICULTURAL LAND USE AND TRENDS BY SECTOR

2.1 Section Overview

The previous section considered agricultural land resources and trends, with a focus on agricultural lands resources as well as on human resources. This section looks at agriculture in the District in terms of production sectors. The four most important production sectors in terms of economic value and extent of land use are investigated in some depth and include: grazing, cultivated agriculture (mainly vegetable row crops, fruit and nut crops), nursery crops and vineyards.

The section concludes with a brief summary of urban agriculture and agri-tourism.

The primary data sources used in this section are the San Mateo and Santa Clara County Crop Reports. These are prepared annually by the County Agricultural Commissioners and are based on self-reporting by farmers and ranchers.

Table 7 gives an overview of all production in San Mateo County, which represents most of the agricultural production in the District. Table 8 summarizes current production for the Santa Clara County area of the District.

Table 7: San Mateo County Crop Production Values & Acreages for 2011, with Changes from 2000-2011

	Cropland Acreage	% Cropland Acreage	Crop Values	% of Total Crop Value	Value 2000-2011 % Change	Acres 2000-2011 % Change
Fruit & Nut Crops	243	1%	$1,666,000	1.2%	73%	131%
Vegetable Crops	1,949	8%	$16,648,000	12.0%	-63%	-22%
Field Crops	920	4%	$561,000	0.4%	-15%	207%
Pasture/Range	19,524	82%	$204,000	0.2%	-47%	-36%
Livestock			$2,312,000	1.7%	40%	
Livestock & Apiary Products			$1,478,000	1.1%	475%	
Floral & Nursery Crops -Indoor	214	1%	$90,541,000	67.0%	-17%	-64%
Floral & Nursery Crops -Outdoor	690	3%	$20,890,000	16.0%	-52%	-37%
Total	**23,540**	**100%**	**$134,300,000**	**100%**	-33%	-33%

Source: San Mateo County Agricultural Crop Reports, 2000-2011

.

Table 8: Santa Clara County (MROSD area) 2011 Crops

	Acreage
Fruit & Nut Crops - orchard	71
Fruit & Nut Crops - vineyard	302
Vegetable Crops	6
Field Crops	0
Pasture/Range	430
Floral & Nursery Crops -Indoor	30
Floral & Nursery Crops -Outdoor	31
Total	**870**

Source: Santa Clara County Ag. Crop Report 2011

2.2 Grazing

Overview

This section covers grazing lands and livestock operations primarily in San Mateo County. Within the District there are 48,765 acres of grazing lands, the vast majority of which – 48,335 acres - are located in San Mateo County. The 438 acres of grazing lands in the Santa Clara County area of the District are less than one percent the size of the grazing lands in San Mateo County.

Grazing lands are a predominant land use in San Mateo County and are an important part of the landscape and viewshed. However, data below

indicate that perhaps less than half of the total 48,335 acres of grazing lands in the county are actually grazed.

Key Findings

- A high percentage (46%) of grazing lands in the District as defined by FMMP are owned and/or controlled either by the District itself or by other public agencies and private land trusts.
- The amount of land that is actually grazed (or considered potential grazing lands) by the District also include 'other lands' and so is much greater than the acreage categorized by FMMP as grazing lands. When expanding the definition of grazing lands in this way, the percentage of grazing lands controlled by the District or other public agencies/land trusts increases to nearly 65%.
- Some ranchers express concern that their viability is in the hands of the District and other public landowners for whom maintaining and enhancing agricultural economic viability is not a top priority
- Although the District has helped protect approx. 7,000 acres of grazing land, reintroducing 3,000 acres that are actively grazed, and rebuilt ranch residences at two coastal properties and provides rental offsets to grazing and agricultural tenants for infrastructures improvements, ranchers express concern that their viability is in the hands of the District and other public landowners for whom maintaining and enhancing agricultural economic viability is not a top priority.
- Additional constraints include lack of processing facilities, fragmentation of grazing lands, and increasing conflicts between wildlife and livestock. Notably, the District is working with private neighbors to identify common grazing tenants.
- Given both the growing market demand for ecologically and humanely produced animal products and the recognition on the part of land owners that grazing is an effective land management strategy, there exists significant potential to support goals of both ranchers and conservation organizations.
- New livestock operations, such as goat dairies and pastured poultry, show promise for modest growth.

Acreage

Two methods of assessing extent of grazing acreage within the District have been utilized.

1. FMMP maps and monitors "land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities."
2. County Crop Reports provide information about the extent of acreage reported by landowners and ranchers as utilized for 'pasture' and 'pasture, irrigated'. For purposes of this study we will consider these terms equivalent to 'grazing lands'. MROSD and others use the term 'rangeland', which again, we will use as an equivalent to 'grazing lands' for purposes of this study.

Grazing lands (again, as defined by FMMP) represent around 13 percent (48,765 acres) of the total amount of land within the District jurisdiction (370,622 acres). Of these 48,765 acres of grazing lands, 8,227 acres are owned by the District and comprise 17 percent of grazing lands within its jurisdiction. An additional 317 acres are protected via easement held by the District. Virtually all of the acreage owned and protected by the District is currently grazed under lease agreements with ranchers.

While FMMP data is important, it does not tell the complete story with regard to how much land is being grazed. Grazing is utilized as a management tool by the District on lands that are categorized by FMMP as grazing lands, as well as 'other lands'

such as forests. This means that grazing as an agricultural practice is occurring on much more acreage than is indicated by the grazing lands figure provided by FMMP. For example, Clayton Koopmann indicated that by the end of 2,014 up to 12,000 acres of lands owned by the District would be actively grazed. In addition, he stated that there are more than 17,000 acres of lands which are apt for grazing. Specifically, he shared that Montebello Open Space Preserve and Russian Ridge Open Space Preserve hold great potential for grazing, but will not be grazed in the near future due to lack of infrastructure.

Apart from grazing lands owned and permanently protected by the District, there are also 13,677 acres of grazing lands within the District's jurisdiction, that are protected either in fee or through easements held by other conservation organizations including Peninsula Open Space Trust (POST) and State Parks, among others.[19] Thus 22,221 acres (45 percent) of the total grazing acreage within the District jurisdiction is permanently protected.

Depending on which data source is utilized, very different trends are identified with regard to changes in extent of grazing lands over the past decade. In Table 9, FMMP grazing land data for the District is compared with San Mateo Crop Report data on grazing lands. (District grazing land data is used as a proxy for San Mateo County grazing land data since almost all District grazing land is in the county.)

According to the Crop Report, acreage actually utilized for livestock pasture decreased by 35.6 percent from 2000- 2010. However, according to FMMP data, grazing acreage has increased by nearly 7 percent during this time period. The vast majority of this increase is primarily the result of non-irrigated farmland (Farmland of Local Importance, as classified by FMMP) being converted to grazing lands. Between 1990 and 2012, 3,433 acres of farmland were converted to grazing lands. Most of that acreage (3,081 acres) was previously classified as Farmland of Local Importance. A deduction is that these converted lands were located on steeper slopes, more marginal soils and/or in areas with unreliable water supply.

Clayton Koopmann, Rangeland Ecologist at the MROSD[20], weighed in about this large discrepancy between FMMP and Crop Report data. Contrary to what the Crop Report data suggest, Koopmann does not see evidence of large amounts of grazing lands sitting idle within the District. On the contrary he sees ranchers having difficulty finding adequate amounts of grazing acreage to lease. As an example, and as noted above, the 8,544 acres of grazing lands that the District owns are currently leased to ranchers.

Possible explanations for the reduced acreage reported in the Crop Report include underreporting and lack of reporting by landowners and operators. (Although this does not explain the significant reduction of more than 10,000 acres indicated by the difference between 2008 and 2010 Crop Report data.) The data showing a reduction in acreage being grazed seems to contradict anecdotal information that

Table 9: MROSD Grazing Lands acreage per FMMP and SMC Crop Report Data

Year	FMMP acres	Crop Report acres	Difference
2000	45,716	30,300	15,416
2004	45,949	30,300	15,649
2008	48,959	30,300	18,659
2010/2011	48,797	19,524	29,273
% change	**7%**	**-36%**	

[19] Acreage and easement/title holders to be determined.

[20] Personal communication, April 8, 2013.

there is more demand for grazing lands than supply. It is also at odds with the considerable increase in revenue from cattle operations over the past several years. (See Table 10.)

One point on which there is agreement, according to comments from several interviews, is that there is a growing recognition on the part of landowners that grazing animals provide important ecosystem services such as vegetation management, fire protection, and habitat provision through stock ponds.

Locations

Most grazing lands within the county are located along the coast. District protected (fee title) grazing lands, which total 8,534 acres, are primarily located along the western side of Skyline Boulevard.

Types of Operations, Scales and Markets

Data from the 2007 USDA Agricultural Census indicate that there were 53 cattle and calf operations in San Mateo County, in 2007 up from 48 in 2002. Number of animals (cattle and calves) sold in the 2007 Census was reported as 2,419, essentially the same as in 2002 at 2,421. Production systems of grazing operations in San Mateo County include traditional cow/calf, beef cattle, as well as a handful of dairies including three milk cow dairies as well as sheep and goat dairies.

According to the 2007 Ag Census, 44 of the 53 cattle operations in the County utilize rotational [21]or management intensive grazing[22]. Five ranches reported having organic pastureland, for a total of 142 acres.

In terms of scale, the two main metrics for characterizing the scale of a grazing operation are acreage and number/head of animals or Animal Unit Months (AUM). While there are certainly properties being grazed that are less than 2,500 acres, this is the minimum amount of land that rancher Doniga Markegard[23] says is needed in order to be viable at least for a grass-fed beef operation, such as hers. She reports that this amount of acreage will allow a grass-fed beef rancher to finish 100 head of steer a year. She noted that ranchers are always looking for additional land to access, in order to "bank" grass in the case that drought conditions reduce the amount of grass available for grazing.

As a point of reference, the Markegards graze their animals on six different parcels, three in Sonoma County and three in San Mateo County. The parcels and total acreage in San Mateo are larger than those in Sonoma County. They lease one property from the District that is 952 acres, and lease two others, including one from POST that is approximately 2,000 acres and a third that is ~550 acres, for a total of about 3,500 acres.

According to the Census, only five cattle operations sell more than 100 head of cattle per year, which suggests that most cattle grazing in the county is made up of cow/calf operations.

In terms of markets, it is most common for the non-milk operations to sell their animals in the traditional manner - at the "saleyard". According to the interviewees, an estimate of direct-to-consumer marketed meat that is produced in the county is on the order of 5 percent of total.

Economic Values

Table 10 summarizes economic data about grazing and livestock operations in San Mateo County

[21] Rotational Grazing: Planting forage and using grazing rotations among different fields to maximize production and reduce sediment and nutrient runoff. From: http://www.wi.nrcs.usda.gov/programs/solutions/rotationalgrazing.html

[22] Management-intensive grazing (MIG) is the movement of grazing animals through a series of paddocks for brief periods of time so that the forages are allowed periods of regrowth to restore reserves and in so doing, the animals are provided with high quality feed if returned at the proper time. From: Dairy Success Through Management Intensive Grazing. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs144p2_025534.pdf. Accessed May 30, 2013.

[23] Personal communication, April 30, 2013.

from 2000 to 2011. It shows that livestock revenues have increased by 40 percent over this period, led by a significant (53%) increase in the cattle and cow/calf sector. Livestock products also appear to be on the upswing, led by value-added and processed products including goat cheese, wool, and honey.

Table 10: Grazing-Livestock Production San Mateo County Agricultural Activity 2000 - 2011

All values in 2008, except for 2011	2000		2004		2008		2011			
	Gross Market Value	% Crops (a)	Gross Market Value	% Crops	Gross Market Value	% Crops	Gross Market Value	% Crops	Value % Change 2000-	Acres % Change 2000-
Field Crops	**$1,048,315**	**0.5%**	**$825,852**	**0.4%**	**$772,000**	**0.5%**	**$ 765,000**	**0.6%**	**-27%**	**-35%**
Beans, Dry Edible (a)	$370,866	0.2%	$155,758	0.1%	$184,000	0.1%	$ 362,000	0.3%	-2%	-61%
Grain (Barley, Oats, Rye, Wheat)	$185,433	0.1%	$71,716	0.0%	$72,000	0.0%	$ 66,000	0.0%	-64%	19%
Hay (Oats)	$61,811	0.0%	$187,133	0.1%	$166,000	0.1%	$ 102,000	0.1%	65%	-38%
Hay (Volunteer)	$44,504	0.0%	$61,631	0.0%	$38,000	0.0%	$ 31,000	0.0%	-30%	-41%
Pasture (Irrigated)	$51,921	0.0%	$47,063	0.0%	$42,000	0.0%	$ 30,000	0.0%	-42%	-34%
Pasture (Other)	$333,780	0.2%	$302,551	0.2%	$270,000	0.2%	$ 174,000	0.1%	-48%	-36%
Livestock (b)	**$1,646,646**	**0.8%**	**$1,991,232**	**1.1%**	**$2,378,000**	**1.5%**	**$ 2,312,000**	**1.7%**	**40%**	**n/a**
Cattle and Calves	$1,149,685	0.6%	$1,419,747	0.8%	1814000	1.1%	$ 1,755,000	1.3%	53%	
Sheep and Lambs	$98,898	0.0%	$93,006	0.0%	95000	0.1%	$ 107,000	0.1%	8%	
Hogs and Pigs	$176,780	0.1%	$253,246	0.1%	180000	0.1%	$ 135,000	0.1%	-24%	
Other (c)	$221,284	0.1%	$225,232	0.1%	289000	0.2%	$ 315,000	0.2%	42%	
Livestock Products & Apiary (d)	**$257,000**	**0.1%**	**$830,334**	**0.4%**	**$851,000**	**0.5%**	**$ 1,478,000**	**1.1%**	**475%**	**n/a**
Honey	$54,000	0.0%	$133,346	0.1%	$185,000	0.1%	$ 336,000	0.3%	522%	
Beeswax	$1,000	0.0%	$1,121	0.0%	$3,000	0.0%	$ 4,000	0.0%	300%	
Other (e)	$202,000	0.1%	$695,867	0.4%	$663,000	0.4%	$ 1,138,000	0.8%	463%	

(a) Includes Cranberry, Fava, etc.;
(b) For 2000-2008, includes Cattle and Cows, Sheep and Lambs, Hogs and Pigs, Chickens, Goats, Turkeys, etc. Production value expressed in "Number Head Sold";
(c) For 2011, includes Chickens, Goats, Turkeys, etc.;
(d) Production value expressed in lbs.
(e) Includes Goat cheese, Eggs, Wool, etc.

Sector-wide Infrastructure

According to interviewees, ranch-based infrastructure within the District, regardless of ownership, is severely degraded. Ranch-based infrastructure that is lacking or degraded include cross fencing and water conveyance. With respect to sector-wide infrastructure, there are no meat processing or storage facilities in the county, which makes it difficult to scale up operations and build a local demand for meat products.

The trends, constraints and opportunity sections below primarily reflect highlights of comments from interviewees related to grazing specifically.

Part 3 of this document provides more detail about trends, constraints and opportunities for agriculture in the District overall.

Trends

- Increased interest in farming and ranching as a vocation and profession.
- Increased demand for meat and animal products that are raised in a manner that cares for the environment, utilizes humane practices, and is local.

- Interest on the part of the District and POST to support agriculture as a strategy to manage lands under their stewardship.

Constraints

- Ranching is a marginally profitable enterprise with the cost of doing business going up every year. It is extremely challenging to operate a viable business, let alone attract new ranchers to the business. Interviewees state that land costs have increased. They state for example, that the animal unit/month fees charged by District are much higher than the Bureau of Land Management. Grazing lease *terms based on adjustment at the end of the year and "animal units per month" are of concern to one interviewee who states that an* increase in prices in a given year does not necessarily translate into profitability overall. Another interviewee expressed concern that when a parcel goes from conservation to grazing land use the rancher is expected to pay possessory income tax.
- Public landowners lack a detailed understanding about the economics of ranching. Limited grazing land availability is limiting a viable scale of operations.
- Lack of adequate infrastructure on ranches and the cost to upgrade and/or install infrastructure is a barrier to bringing more grazing lands on-line.
- Ranchers seem to bear the bulk of the burden to install infrastructure. Landowners not always willing to invest in infrastructure such as wells, troughs, fencing needed to make grazing leases viable.
- Lack of affordable housing for agricultural operators and workers, complicating their ability to be close to the land and their crops and animals.
- Fragmentation of grazing lands requires moving animals around.
- Lack of local processing facilities is hindering growth of the grass-fed beef industry in particular.
- Habitat protection can lead to reduction of available grazing lands.
- Increasing conflicts between wildlife and livestock. New approaches to protecting livestock are needed.

Opportunities

- The growing recognition on the part of landowners that grazing animals provide important ecosystem services may provide an opportunity in that it might result in more land becoming available for grazing. Some ranchers also hope that at some point there might be payment for the provision of such ecosystems services.
- Some new opportunities with other livestock, such as goats and pastured poultry, show promise for modest growth in production value, though not in demand for acreage.
- There is growing market demand for ecologically and humanely produced animal products.

Next Steps for Analysis and Data Gaps

- There are discrepancies that need to be addressed in the data about extent of District grazing lands actually being grazed and the extent of grazing acreage that the District itself manages and is actively leasing to ranchers.
- The ownership and status of the 438 acres of grazing lands in the Santa Clara County within the District jurisdiction need to be further investigated.

2.3 Crop Production

Overview

This section covers production of vegetable crops and fruit and nut crops in San Mateo County and the Santa Clara County area of the District.

Except as otherwise noted, data comes from the annual Crop Reports produced by the respective county agricultural commissioners.

Vegetable crop production is important in San Mateo County. Such production accounts for almost all of the land use of County's prime farmland. The county is also a leading producer in the state for Brussels sprouts and peas, crops which thrive in the cool coastal climate. Pumpkins, artichokes, leeks and green beans are other important vegetables crops in the county.

On the other hand, vegetable crop production represents only around 12 percent of overall production values for the county and production values and acreage for this sector have been experiencing consistent declines since at least 2000. During the 2000-2011 period, the value of vegetable crop production declined 63 percent, while acreage in production as reported in the County Agricultural Crop report dropped 22 percent. (See Table 12.)

Vegetable crop production in the Santa Clara County area of the District is negligible. The 22 acres in production is just about the same as the number of acres of remaining prime farmland in this area. However, the Santa Clara County area of the District has about 150 percent more acreage in production in the fruit and nut category (which includes wine grapes), than does San Mateo County. Wine grape production is summarized in Section 2.5.

Key Findings

- Over the past decade, the value of crop production has experienced a steep decline (63%) with acreage also declining (22%). Brussels sprouts make up about half of crop values. Diversification of crops will be critical to future viability of industry.
- Although fruit production (mainly berries and wine grapes) represent only around 10 percent of overall crop production value, over the past decade, fruit production value has increased by 73 percent and fruit acreage by 131 percent.
- Constraints include regulatory burden on farmers, insufficient and uncertain water supply and lack of infrastructure.
- Succession of row crop operations is a key challenge for future viability. While there appears to be some influx of new farmers, they are undertaking small diversified operations rather than taking over the larger, conventional operations. In order for larger properties of crop acreage to be maintained, new operators must be supported.

Locations

The vast majority of farmland acreage within the MROSD is located along the San Mateo Coast. (See the MROSD Agricultural Resources map, Appendix B.)

Acreage

Two methods of assessing extent of crop acreage have been utilized: FMMP maps based on farmland classifications and County Crop Reports. Unlike for grazing lands, FMMP definitions of farmland require that land have been used for agricultural production at some time during the four years prior to mapping date.

Crop lands represent around 1.6 percent (6,083 acres) of the total amount of land within the District jurisdiction (370,622 acres). Of these 6,083 acres of crop lands, 113 acres are owned by the District [24] and represent 1.8 percent of crop lands within its jurisdiction.

Apart from crop lands owned and permanently protected by the District, there are also 2,396 acres of crop lands within the District jurisdiction protected either in fee or through easements that are held by other agencies including POST, State Parks, among others.[25] Thus 2,509 acres (41

[24] MROSD

[25] Acreage and easement/title holders to be determined.

percent of the total crop land acreage within the District jurisdiction) is permanently protected.

Depending on which data source is utilized, very different trends are identified with regard to changes in extent of crop lands over the past decade. Table 11 conveys changes in crop acreage for San Mateo County over the past decade according to both methods. Utilizing FMMP data, farmland acreage has decreased by 46 percent during the 2000-2010 period. However, according to the Crop Report, acreage actually utilized to produce crops in San Mateo County decreased by 28 percent during the same period. Similar to grazing, we anticipate the FMMP data to be most accurate, and that these differences are owed to underreporting and lack of reporting by producers for the County Crop Report.

Table 11: MROSD Crop Lands acreage per FMMP and SMC Crop Report Data

Year	FMMP acres	Crop Report acres	Difference
2000	9,879	5,562	4,317
2004	8,937	4,620	4,317
2008	5,482	4,244	1,238
2010/2011	5,292	4,016	1,276
% change	**-46%**	**-28%**	

Farmland Classifications

Table 1 shows the number of acres within the District per farmland classification: Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, and Unique Farmland. These classifications are important because classifications indicate suitability for different crops.

Organic Agriculture

Organic agriculture represents a small fraction of crop production in San Mateo County. Fourteen farms, of the nineteen farms in the county that report organic acreage, produce vegetables and/or fruits on a total of 38 acres. [26] In addition, thirteen farms report that they are transitioning another 129 acres of combined pasture and cropland to certified organic practices. By way of contrast, Monterey County has 106 organic farms with a combined total of 20,404 acres; San Benito County has 71 organic farms with a combined acreage of 13,467 acres; and Santa Cruz County has 89 farms with a combined total of 1,406 acres.[27]

Scales

Due to the fact that relatively few types of crops are produced on the coastal farmlands, the scale of those crop fields tend to be larger than in areas where there is greater crop diversity.

Markets

According to interviewees, conventionally grown crops tend to be sold wholesale, via grower shippers in the Salinas Valley or through the terminal market in South San Francisco.

Organically grown crops tend to be sold through direct markets, with a small amount of product moving through the wholesale part of the supply chain. According to preliminary findings from the market study being produced by the Community Alliance with Family Farmers (CAFF), farmers in San Mateo County that grow crops similar to those being grown in Santa Cruz and Monterey Counties have difficulty competing on price due to inferior yields and limited agricultural infrastructure that has declined over the past three decades.[28] An important component of agricultural infrastructure that has disappeared is the support businesses such as tractor dealerships and repair shops, welding shops, seed and supply distributors, etc.

[26] USDA Ag Census 2007

[27] USDA Ag Census 2007

[28] Bob Corshen, Community Alliance with Family Farmers, personal communication. April 2013.

Direct Markets

- Community Supported Agriculture (CSA) – According to the Census of Ag there were three CSA operations in San Mateo County in 2007.[29]
- There are 26 Farmers Markets in San Mateo County. Despite this abundance of direct marketing opportunities, San Mateo County farmers are underrepresented at area farmers' markets. Interviewees have explained this situation is due to a number of factors, including distance from markets, lack of product diversity, and less competitive pricing.

Agri-tourism

- Farm Stands – many seasonal farm stands focus on pumpkins. These are often combined with pumpkin patches and corn mazes. Exceptions include stands along Highway 1 that sell primarily sell peas and artichokes.
- U-Pick operations combined with farm stands. Primary examples are Phipps Ranch and Coastways Ranch both which have focus on berries and both located in or near Pescadero, and the long-established Webb Ranch in Portola Valley, which grows a wide variety of products due to its temperate bayside location.
- Half Moon Bay Pumpkin & Art Festival in October is a good outlet for local pumpkin growers and also significant agri-tourism draw.

Economic Values

Table 12 illustrates the dramatic decline in dollar value, and to a lesser degree, acreage, for San Mateo County crops, over the last decade. The most significant change was the elimination of mushroom production, which represented nearly $30 million in sales in 2000, and is now non-existent. Interviewees cite various reasons for the closing of the mushroom facility including issues concerning labor, water supply and environmental compliance. Other crops that declined noticeably in production value and/or acreage were artichokes (down 68 % in value), beans and peas. On the other hand, Brussels sprout production is up by 78 percent, even though acreage is down 9 percent, which indicates impressive gains in yields.

Production of strawberries and bush berries were not tracked as individual commodities in 2011. Due to the fact that there were fewer than four growers reporting production of these crops, there were tracked in the 'Miscellaneous' category. However since this category grew more than fourfold between 2008-2011, and since production of strawberries and bush berries is continuing on the coast, even if by just a few farmers, it can be surmised that these crops are proving to have some staying power.

San Mateo County wine grape production is another bright spot in the fruit category, having grown about 200 percent in both value and acreage during the study period.

The trends, constraints and opportunity sections below primarily reflect highlights of comments from interviewees related to crop production specifically. Part 3 of this document provides more detail about trends, constraints and opportunities for agriculture in the District overall.

[29] USDA Census of Agriculture 2007

Table 12: San Mateo County Agriculture Crop Activity 2000-2011 - FRUIT & NUT and VEGETABLE CROPS

All values in 2008$, except for 2011	2000			2004			2008			2011				
	Acres	Gross Market Value	% All Crops (a)	Acres	Gross Market Value	% All Crops (a)	Acres	Gross Market Value	% All Crops (a)	Acres	Gross Market Value	% All Crops (a)	Value % Change 2000-2011	Acres % Change 2000-2011
Fruit & Nut Crops	**105**	**$961,780**	**0.5%**	**159**	**$1,595,675**	**0.8%**	**204**	**$1,635,000**	**1.0%**	**243**	**$1,666,000**	**1.2%**	**73%**	**131%**
Bushberries	24	$268,260	0%	28	$419,089	0%	33	$371,000	0%			0%	-100%	-100%
Strawberries	18	$316,473	0%	15	$315,997	0%	24	$543,000	0%			0%	-100%	-100%
Wine Grapes	45	$171,835	0%	86	$467,273	0%	96	$481,000	0%	135	$508,000	0%	196%	200%
Miscellaneous (b)	18	$205,213	0%	30	$393,316	0%	51	$240,000	0%	108	$1,158,000	1%	464%	500%
Vegetable Crops	**2,509**	**$44,701,747**	**22%**	**2,436**	**$33,443,064**	**18%**	**2,097**	**$20,446,000**	**13%**	**1,949**	**$16,648,000**	**12%**	**-63%**	**-22%**
Artichokes (c)	231	$776,347	0%	93	$567,003	0%	66	$407,000	0%	56	$249,000	0%	-68%	-76%
Beans, Fava			0%			0%			0%	210	$560,000	0%		
Beans, Snap	143	$584,732	0%	158	$726,122	0%	118	$597,000	0%	94	$389,000	0%	-33%	-34%
Brussels Sprouts (d)	723	$4,977,025	2%	734	$6,698,698	4%	675	$5,841,000	4%	655	$8,857,000	7%	78%	-9%
Leeks	163	$1,657,772	1%	155	$1,462,329	1%	175	$1,492,000	1%	160	$1,507,000	1%	-9%	-2%
Mushrooms	17	$29,896,765	15%	14	$19,101,038	10%	8	$6,927,000	4%			0%	-100%	-100%
Peas	345	$806,016	0%	267	$596,137	0%	219	$795,000	0%	218	$738,000	1%	-8%	-37%
Pumpkins	240	$653,961	0%	242	$626,392	0%	263	$952,000	1%	226	$639,000	0%	-2%	-6%
Misc. Vegetables														
Field and Indoor Grow	647	$5,349,128	3%	773	$3,665,346	2%	573	$3,435,000	2%	330	$3,709,000	3%	-31%	-49%

(a) Includes vegetable, field, and fruit & nut crops. Does not include floral and nursery crops or livestock.
(b) For 2004: (Includes Apples, Kiwi, Pears, Walnuts, etc.) For 2008: (Includes Kiwi, Apples, etc.).
(c) For 2000: (Includes Cabbage, Corn, Herbs, Leaf Lettuce, Potatoes, Spinach, Swiss chard, etc.) For 2004: (Includes Beets, Cabbage, Corn, Herbs, Leaf Lettuce, Potatoes, Swiss Chard, Tomatoes, etc.) For 2008: (Includes Herbs, Fava Beans, Peppers, Swiss Chard, Edible Flowers, Tomatoes, etc.)

Trends

- Older, more established conventional growers are holding on, but are not being replaced.
- Big turnover amongst new, younger farmers, who often lack resources and skills, don't have established relationships, and usually don't own their land

Constraints

- Regulatory burden is increasing, while technical and financial assistance for compliance is not keeping pace. New food safety regulations and new labor regulations were specifically mentioned.
- Deer pressure from open space lands
- Lack of infrastructure such as tractor repair services and supply depots and also processing facilities.
- Insufficient and uncertain water supply.
- Nitrate contamination of some wells.
- Conflicts with urban land use in some urban edge areas.

Opportunities

- The buy local campaign (As Fresh as it Gets) has been effective at increasing demand and should be continued.
- Value-added production through direct and local sales and/or organic production is important for viability
- Investigation into the possibilities of bio-char for soil texture, carbon sequestration, and water use efficiency.
- Research is underway to study biopesticides and fumigant alternatives for Brussels sprouts, a crop that has required a heavy load of chemical inputs for production.

Next Steps for Analysis and Data Gaps

There are discrepancies that need to be addressed in the data about extent of District grazing lands actually being grazed and the extent of grazing acreage that the District itself manages and is actively leasing to ranchers.

2.4 Nursery and Horticulture

Overview

Nursery crop production continues to have a key role in San Mateo's agricultural economy. Floral and nursery crops represent the lion's share of agricultural production value in San Mateo County. Even with the decline in value of the agricultural sector overall during the past decade, combined with a decline in value and acreage of nursery crops, today nursery crops represent an even greater share (83%) of agricultural production in the county than it did in 2000. The nursery crop sector takes up around 900 acres, which is around 23 percent of all the county's crop land. (See Table 7.) In addition, the nursery crop sector is a significant and most likely still the largest agricultural employer in the county. (See Demographics section, employment subsection.)

Key Findings

- The nursery crop sector has the key role in San Mateo County's agricultural economy, both through direct sales and also likely through indirect agri-tourism impacts, and represents a considerable percentage (23%) of the land use of crop land.
- The sector is a significant contributor, and likely the largest, to agricultural employment overall.
- The sector is contracting and there is consolidation occurring. The primary vulnerability stems from losses to foreign competition[30]. Additional factors are labor issues and lack of innovation.
- Idle infrastructure might represent an opportunity to be leveraged by crop farmers.

Acreage

Combined, indoor and outdoor nursery crop production takes up a little over 900 acres, a reduction of around 53 percent over the past decade. (See Table 13.) Interviewees have stated that there is idle greenhouse capacity in the county and suggest that such capacity could be converted to use for growing vegetable starts, growing vegetables out of season, or even customized for aqua-ponics operations.

Floral and Nursery crops in Santa Clara County are limited to Christmas tree farms (two operators with around 30 acres combined) in the foothill areas and indoor and outdoor plant nurseries, (five operators with around 30 acres combined).

Scales

While indoor floral and nursery crops represent the largest percentage of the nursery sector production value, outdoor nursery crops represent the largest percentage of the nursery sector acreage. Acreage of some products is in fact on a par with some crop production. There are 412 acres of cut flowers, 278 acres of ornamentals, and 145 acres of Christmas trees. Vegetable crop acreage includes 226 acres of pumpkins, 218 acres of peas and 160 aces of leeks.

Locations

Nursery production is concentrated along the coast around Half Moon Bay and also includes Christmas tree farms in several coastal and bayside locations.

Markets

Some of the larger operations such as Rocket Farms and Bay Cities market their products solely through wholesale channels, while retail operations such as the Half Moon Bay Nursery[31], maintain retail operations to sell directly to consumers, in addition to selling wholesale.

[30] Interviewee John LaGrandeur of Rocket Farms referred to foreign competition as one of the primary drivers of contraction and consolidation in the nursery subsector.

[31] Half Moon Bay Nursery states on its website that it has over 3 acres of retail space.

Table 13: San Mateo County Agriculture Activity 2000-2011 - NURSERY CROPS

All values in 2008 $ except for 2011	2000			2004			2008			2011				
	Acres	Gross Market Value	% All Crops	Acres	Gross Market Value	% All Crops	Acres	Gross Market Value	% All Crops	Acres	Gross Market Value	% All Crops	Value % Change 2000-2011	Acres % Change 2000-2011
Floral & Nursery Crops - Indoor	**599**	**$108,694,000**	**54%**	**323**	**$105,339,000**	**56%**	**311**	**$108,957,000**	**68%**	**214**	**$90,541,000**	**67%**	**-17%**	**-64%**
Potted Plants	255	$95,186,000	47%	251	**$94,680,000**	50%	245	**$98,703,000**	61%	170	$83,320,000	62%	-12%	-33%
Flowering	173.35	66,786,000	33%	202	$77,620,000	41%	222	$91,308,000	57%	156	$79,520,000	59%	19%	-10%
Foliage	82	$28,400,000	14%	49	$17,060,000	9%	23	$7,395,000	5%	15	$3,800,000	3%	-87%	-82%
Cut Flowers	77	$11,655,000.00	6%	61	$7,710,000	4%	60	$9,052,000	6%	39	$6,503,000	5%	-44%	-49%
Bedding Plants, Cuttings & Liners	12	$1,853,000	1%	11	$2,949,000	2%	6	$1,202,000	1%	4	$718,000	1%	-61%	-62%
Floral & Nursery Crops - Outdoor	**1,094**	**$43,738,000**	**22%**	**938**	**$39,870,000**	**21%**	**807**	**$25,886,000**	**16%**	**690**	**$20,890,000**	**16%**	**-52%**	**-37%**
Ornamentals	356	$32,109,000	16%	402	$32,325,000	17%	312	$19,436,000	12%	278	$15,358,000	11%	-52%	-22%
Nursery Stock	192	$31,822,000	16%	211	$29,496,000	16%	166	$19,134,000	12%	133	$15,010,000	11%	-53%	-31%
Christmas Trees	149	$287,000	0%	175	$360,000	0%	146	$302,000	0%	145	$348,000	0%	21%	-3%
Herbaceous Perennials	15	$2,324,000	1%	16	$2,469,000	1%			0%			0%	-100%	-100%
Cut Flowers	738	$11,629,000	6%	536	$7,545,000	4%	495	$6,450,000	4%	412	$5,532,000	4%	-52%	-44%

The agri-tourism impact of the nursery business is likely to be considerable. Preliminary research indicates that with its retail nursery outlets and Christmas tree farms, the nursery crop sector has more agri-tourism destinations than does all other production sectors combined.

Economic Values

Table 13 illustrates the decline in both dollar value (notably for outdoor nursery crops) and in acreage (notably for indoor nursery crops) over the past decade.

Sector-wide infrastructure

Informants tell us that greenhouse infrastructure is in need of upgrades. Water supply and treatment infrastructure for individual operations is an important component of these upgrades, given water scarcity and increased regulation of waste water discharge by the State Water Resources Control Board and the Coastal Commission.

Trends

- In a slow decline due to constraints outweighing opportunities.

Constraints

- Resistance to change has led to at least one local industry leader (Nurserymen's Exchange) having to sell.
- Peak season labor needs exceed local capacity; large operators have to bus workers in from as far away as Stockton.
- Competition from foreign imports.
- Inadequate housing and transportation for workers compound labor scarcity
- Need help with energy and water efficiency, including effluent treatment for water recycling.

Opportunities

- Existing infrastructure provides some capital to build on.
- Off-season food production and vegetable starts for farmers.
- Aquaponics: fish and produce growing systems that can utilize vacant greenhouse infrastructure

Next Steps for Analysis and Data Gaps

The agri-tourism impact of the nursery business should be investigated since it appears to be considerable and since agri-tourism generally has an economic multiplier effect.

More nursery business owners should be interviewed since this is such an important sector to the overall agricultural economy. [32]

2.5 Vineyards

Acreages and production values of vineyards in San Mateo and San Clara Counties are discussed in the previous Crops Sector section. Below is a summary of other key facts about this relatively thriving agricultural sector.

Operations and Locations

All wine grape growing operations in the District are within the Santa Cruz Mountains AVA (American Viticultural Area) which has around 70 members. Most of the established operators have been in business for at least 15 years.[33]

San Mateo County has around 12-14 wine grape operations with total acreage of 135-145 acres. Four of these have commercial acreages greater than 10 acres. Two of these, the Thomas Fogarty Winery/Vineyard (~45 acres) and Spring Ridge Vineyards (~15 acres) are located in Portola Valley. Two others, Woodside Vineyards (~38 acres) and Clos de la Tech (~28 acres) are located in Woodside. [34]

The MROSD area of Santa Clara County has around 35-40 wine grape operations with total acreage of 302 acres. The largest grower by far is Ridge Vineyards (~123 acres) followed by Mt Eden Vineyards (~42 acres). Other smaller scale wineries of note include Cooper-Garrod Estate Vineyards, Fellom Ranch Muns Vineyard, La Rusticana, Savannah-Chanelle Vineyards, Pichetti, McCarthy Ranch, Lokteff Vineyard and Winery, and Vinedos Pichon. [35]

Much of the remaining grape growing acreage in the District consists of very small commercial acreages of two to five acres and hobby plots, most smaller than one acre[36]

Constraints

- There is far more demand than supply for wine grape growing ground and opportunities to develop new ground are very limited. Most recent expansion in the District has been in the Montabello Road area in Santa Clara County. Interviewees state that other hill-tops that could have been appropriate for wine grape growing have been bought by parks as open space. [37]
- This demand belies the fact that conditions are somewhat challenging. The existing vineyards are located on relatively small parcels, in hilly areas, and have relatively small yields.
- Water supplies are limited so many vineyards are dry-farmed. Where irrigation is used, especially when vineyards are being established, operators need to be careful with water management to avoid soil erosion problems.
- Regulations make it difficult and often prohibitive to establish visitor facilities where the grapes are grown; however as a silver lining, many local wine tasting bars are now cropping up in cities such as Saratoga.

[32] Despite repeated attempts to schedule interviews and expressions of interest from nursery business owners contacted, only one nursery business owner interviewee provided information for this section.
[33] Personal communication, Jan Garrod, Garrod & Cooper Vineyards.
[34] San Mateo County Agricultural Commissioners Office data
[35] Santa Clara County Agricultural Commissioners Office data
[36] Santa Clara County Agricultural Commissioners Office data
[37] Personal communication, Jan Garrod, Garrod & Cooper Vineyards

Opportunities

- The winery business is having a resurgence, with acreage growing as much as feasible and with wine grape land and wine grapes both increasing considerably in value, likely as a result of limits to available and feasible acreage.
- There is also resurgence in the planting of hobby and backyard vineyards, especially in the foothill areas where there are numerous estate and ranchette scale lots. In turn, this has become a boon for the landscapers and contractors who make a good living from planting and maintaining these vineyards, which cost around $30 K per acre to install and around $4-$5 K per acre per year to manage. [38]

2.6 Urban Agriculture and Agricultural Education

Urban agriculture and agricultural education are not, for the most part, significant in terms of land use. However, these sectors are very important in terms of contributing to local food access and creating public awareness about agriculture and local food systems.

Primary types of urban agriculture include school gardens, community gardens, demonstration gardens, job training gardens, research gardens, and botanical gardens. Each of these different types of gardens is characterized in terms including: program offerings; the regulatory and public agencies with which they interact; governance, management, and operating structures; budget ranges; and land tenure arrangements.

There are many cities in the District with community garden programs, including Pacifica, Redwood City, Belmont, San Mateo, East Palo Alto, and San Jose, where there is a long waiting list for community garden plots.

The largest urban agriculture facilities in the District include:

- Collective Roots, located in East Palo Alton, contracts with schools to provide science and nutrition education during the school day to students in pre-school through high school. Their after school programs at schools or community sites offer opportunities to work in organic gardening, organic meal preparations, and related arts, crafts, and sciences.
- Full Circle Farm is an 11 acre, sustainable, educational nonprofit farm in Sunnyvale. The garden hosts field trips for groups from preschool to middle school. Peterson 6th and 7th graders spend one period every two weeks in the garden.
- Hidden Villa Farm is a 16 acre farm that is part of a 1,600 nonprofit open space preserve in the Los Altos Hills. It offers agriculture and wilderness education programs to groups from preschool to high school.
- Deer Hollow Farm is an educational center operated by the City of Mountain View, where visitors, school classes, and community groups can observe and participate in a working farm.
- Elkus Ranch Environmental Education and Conference Center is a several hundred acre facility located in the hills east of Half Moon Bay and operated by UC Cooperative Extension. The environmental education program includes opportunities to learn about the production of food and fiber, the interrelations of plants and animals in their natural habitats, and the importance of environmental stewardship. The District has a relationship with each of these Ag and environmental educational organizations, which could be enhanced.

According to Jason McKenney, Hidden Villa Agriculture Manager, the demand for agricultural education programs far outstrips the capacity of

[38] Personal communication, Jan Garrod, Garrod & Cooper Vineyards

local facilities. Limiting factors are funding for transportation costs and for service provision. McKenney notes that there is also unmet demand for new farmer education and training, such as through the types of internships programs provided by Hidden Villa and other farms.

Several farms have also developed extensive agricultural education programs, which contribute to their revenues while helping market their products and creating public awareness about agriculture in general. Two of the most notable such farms with education programs are:

- Pie Ranch is a diversified 27 acre farm, established as a nonprofit, that hosts youth from the regional high schools to participate in farm-based programs.
- Harley Goat Dairy, located in Pescadero, offers farm and dairy tours year round. The tours, available to school groups, focus on the process of transforming milk into dairy products.

PART 3. DISTRICT-WIDE ISSUES, INITIATIVES AND NEXT STEPS FOR ANALYSIS

This section covers aspects of issues that were not touched on the previous section and is organized by topic: agricultural regulations, water, labor, public education, agricultural viability, farmland preservation, and collaboration among stakeholders, agricultural infrastructure, markets, labor, and socio-economics. Each topic also includes a section on any relevant initiatives and proposed next steps for analysis.

The section was informed by findings from data and existing studies and by comments from interviewees.

3.1 Key Findings by Topic

Regulation

Issues

- Regulatory/permitting requirements are numerous, complex, overly restrictive, sometimes contradictory, and sometimes unreasonable.
- Enforcement of new regulations should be preceded by outreach, education and technical assistance as feasible.

Existing and Pending Initiatives

- Strong appreciation for the commitment of Supervisor Horsley to create and help fund an ombudsperson position that will focus on streamlining, harmonizing and perhaps revising regulatory and permitting processes and also providing technical and financial assistance to farmers.

Water Supply

Issues

- Water, including access to water and water supply reliability are a big challenge, especially given increasing demand for limited and uncertain supply.
- Farmers want technical and financial assistance to help them with water use efficiency, development of off-stream storage, and for nursery businesses in particular for rain water harvesting and development of recycled water facilities. Some of this already happening in nursery businesses.
- There is concern that rights are being taken away for species protection as more land is conserved.

Existing and Pending Initiatives

- Watershed Management Plans have been completed or are underway for watersheds including the Pilarcitos Creek, San Geronimo Creek and Pescadero Creek.
- Integrated Watershed Restoration Program (IWRP) was recently initiated in San Mateo, based in part of the success of the program in Santa Cruz County
- Next Steps for Analysis and Data Gaps
- Lake Lucerne, a reservoir and fishing lake on the coast near Pigeon Point, could conceivably supply water to nearby farms.
- Assessment of, and development of a long-range plan for, all irrigation water supply sources for all prime farmland on the coast, would be beneficial.
- Identify areas of cropland/nursery/grazing land currently have adequate water supply in the near future/long-term future for their current uses.
    - Identify which areas of cropland/nursery/grazing land have had to reduce their water consumption, change crops, or change locations of stock ponds due to resource management (e.g. fish habitat) constraints.

- If more water is needed for crops and there are regulatory or feasibility challenges to capturing more winter precipitation through on-stream and off-stream storage, identify alternatives (e.g. managing upstream areas for greater water interception and retention, changes in crop choice, local capture and water recycling in urbanized areas, more efficient irrigation, etc.).
- Assess the role of groundwater for agricultural use, and how groundwater recharge is likely to change in the future given climate change and any changes in development patterns.
- A watershed-wide and multiple-partner approach to water conservation is needed.

- Determine whether there are changes to the process of implementing water quality and habitat protection regulations that could help farmers through streamlining or increased clarity.
- An initiative in the late 90's to develop a recycled water facility in Half Moon Bay could have potentially augmented supply of irrigation water. It was defeated due to concerns it would be an inducement to growth, but this type of approach may still have potential in the future.
- Currently, coastal San Mateo County is part of the Bay Area Water Management District. It has been suggested, that since this area is more or less, independent in terms of water supply and water management, it might be worth assessing whether it should become its own water management district.

Labor

Issues

- There is virtually no farm labor pool on the coast.
- The high cost of living and lack of affordable housing farm employees (and also for new farmers) is problematic.
- There are regulatory challenges with remodeling existing structure and with permitting accessory dwelling units (ADUs) to accommodate employees
- Some farmers state that requirements to remove a packing shed and labor camp were for the purpose of making a nice view for the public.

Existing and Pending Initiatives

- The County is reviewing policies related to addressing the problem of farm employee housing.

Next Steps for Analysis and Data Gaps

- Assessment of the needs and optimal locations for creating needed farm worker housing.

Public Education

Issues

- There is widespread consumer ignorance about local agriculture, including about its contributions, resources, and about what farmers face.
- There is a need to create greater awareness about what is needed to keep agriculture properties in agricultural use.

Existing and Pending Initiatives

- The *As Fresh as it Gets* campaign is effective. The San Mateo County/Silicon Valley "As Fresh as it Gets" campaign began in 2006, highlighting the fresh produce and seafood in San Mateo

County, as well as the area's locally made goat cheese, wines and beers.

- There is a request for a county-wide public education and awareness campaign, to further increase recognition of the importance of agriculture in the region and to help link farmers and consumers; a school curriculum should be part of the effort.

Collaboration among Key Stakeholders

Issues

- There is insufficient cooperation and collaboration among potential partners.
- The District and POST, as major land conservancy organizations, have not had a focus on the protection of agricultural resources – land, water – or on supporting farmers and ranchers, the critical human resources on which viable farming depends
- There is a big culture divide between commercial, long-time farmers and newer farmers sometimes regarded as hobby farmers.
- Agencies, advocacy organizations, farming groups and land conservancies collaborate to some extent on an issue by issue basis, but a long-term, consensus vision for agriculture that looks at resources, economics, and social factors is lacking.
- Careful consideration is needed concerning the placement of public access trails.
- A long-term vision is needed that includes both strategies for the conservation of farmland and enhancement of the economic viability and that integrates goals for agriculture with open space and community livability goals and with regional sustainability planning.

Existing and Pending Initiatives

- The San Mateo County Food System Alliance has been convening representatives of all the parts of the San Mateo County food system - including public health - since 2006. Recent pending projects include the production of a Food System Assessment and an Aggregation Feasibility Study.
- There has been a request for the Agricultural Workshop convened by Supervisor Horsley in January 2013 to become a bi-annual convening.

Farmland Preservation

Issues

- 'Gentleman farmers' who have outside incomes can drive up cost of land and make it unaffordable for farmers and ranchers trying to make a livelihood.
- San Mateo County has been fairly generous with Williamson Act contracts; perhaps too generous so maybe reducing the size of the contracts.
- There needs to be further assessment of the affirmative easement tool.

Agricultural Viability

Issues

- Need a better understanding of the economies of scale and tipping points per farming sector.
- Agri-tourism and recreation can be both a help and hindrance. Some operations rely on agri-tourism; for other operations (e.g. Brussels sprouts), public access is a problem. Lots of concern and disconnect and need for more systematic planning.
- Not enough growers in the county to meet demand for diversified products at farmers' markets and institutional outlets.

- Investigate how the pricing of leases, including those granted by the District, affect the viability of farming.

Existing and Pending Initiatives

- Continue and deepen eco-systems services research, such as the SC3 project, and eco-systems services market development, such as the CalCAN-led initiative for cap and trade funds to go to agriculture.
- More demonstration projects.
    - Introduction of crop-livestock operations to decrease inputs and rotational grazing to increase soil health.
    - Cloverdale Ranch and Johnston Ranch both good options.

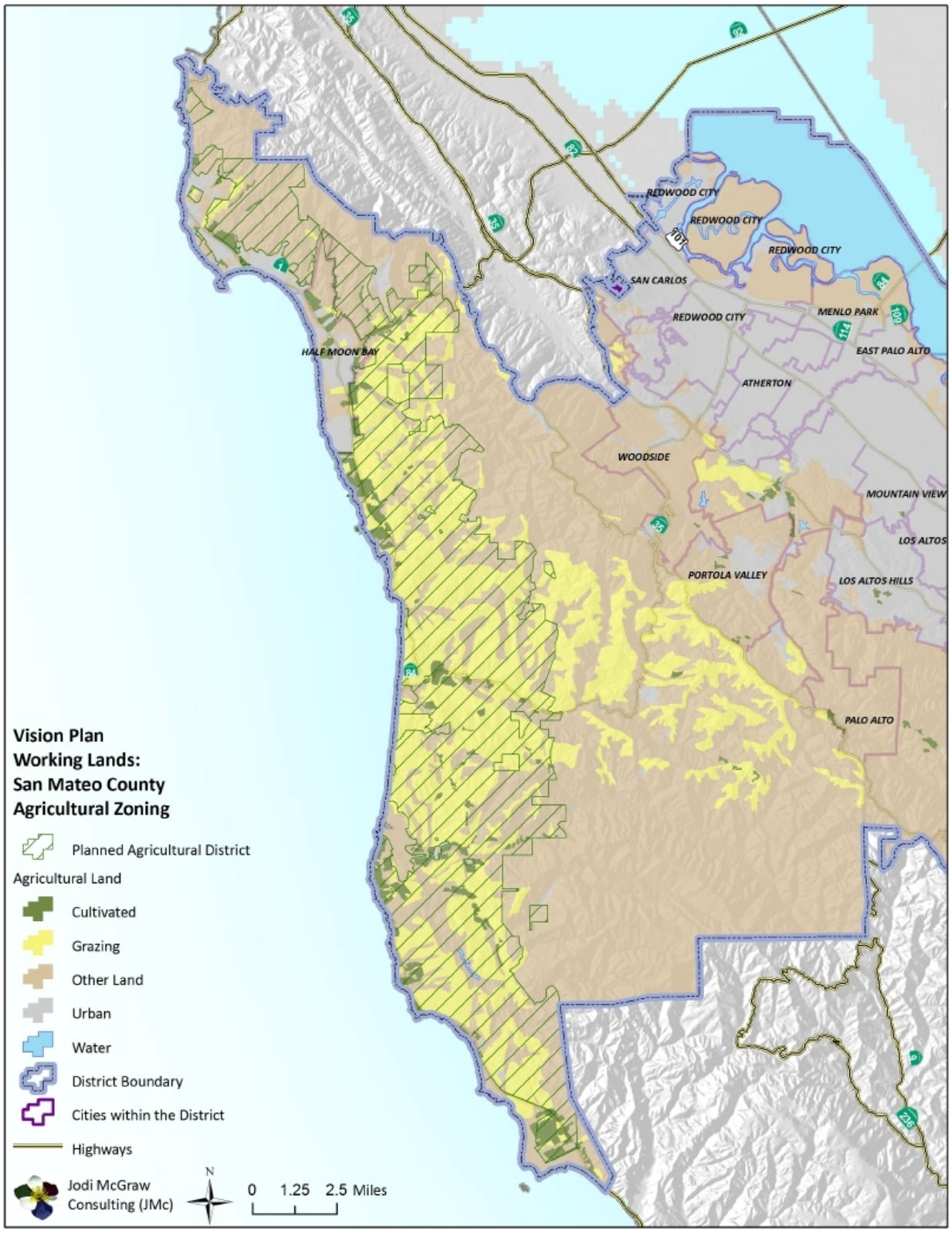
Next Steps for Analysis and Data Gaps

- There is a need to assess the carrying capacity of agri-tourism. Highway 92 and Highway 1, the main connections to population centers, have limited capacity. Pumpkin- and Christmas tree-generated traffic jams are already a problem. Agri-tourism that takes advantage of other seasons might be investigated.
- There is a need to assess how to create more opportunities for farmers to build equity on leased land.

PART 4. APPENDICES

Appendix A

Appendix B


REDWOOD CITY
REDWOOD CITY
REDWOOD CITY
SAN CARLOS
REDWOOD CITY
MENLO PARK
EAST PALO ALTO
HALF MOON BAY
ATHERTON
WOODSIDE
MOUNTAIN VIEW
LOS ALTOS
PORTOLA VALLEY
LOS ALTOS HILLS
PALO ALTO
Vision Plan
Working Lands:
San Mateo County
Agricultural Zoning
Planned Agricultural District
Agricultural Land
Cultivated
Grazing
Other Land
Urban
Water
District Boundary
Cities within the District
Highways
Jodi McGraw
Consulting (JMc)
N
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Appendix C

List of Interviewees

Interviewed

Bob Corshen	Community Alliance with Family Farmers
Fred Crowder	San Mateo County Agricultural Commissioner
Vince Fontana	Rancher
Clayton Koopmann	MROSD
Jan Garrod	Garrod & Cooper Vineyards
Jered Lawson	Pie Ranch
Dave Lea	Cabrillo Farms
John LeGrandeur	Rocket Farms
Peter Marchi	Marchi Farms
Doniga Markegard	Markegard Family Grass-Fed
Jason McKenney	Hidden Villa Farm Manager
Kellyx Nelson	San Mateo County Resource Conservation District

Not interviewed (due to scheduling), but want to contribute

Steve Oku	Oku Nursery
Dave Repetto	Repetto's Nursery
Jennifer Gross	San Mateo County Health System

Appendix D

Source Documents

1) California Department of Conservation Farmland Mapping & Monitoring Program, Data specific to MROSD, 1990-2010.
2) California Employment Development Department Labor Market Data 2011.
3) California Rangeland Coalition Conservation Coalition Strategic Plan 2010-2015.
4) Comprehensive Annual Financial Reports, City of Half Moon Bay, FY 2010-2011 and FY 2011-2012.
5) *Exhibit explores county's history of farming*, Heather Murtagh, The Daily Journal, 3/9/ 2013.
6) Existing Conditions Report, Santa Clara County General Plan Health Element, May 2013.
7) Farmland for Farming: The Pie Ranch Access to Land Project, 2012
8) Midpeninsula Regional Open Space District Strategic Plan 2012
9) Midpeninsula Regional Open Space District, Coastside Protection Program 2004
10) Midpeninsula Regional Open Space District, Coastal Annexation Plan, 2003
11) Protect Farm and Ranch Land - POST Website http://www.openspacetrust.org/whatwesave/farms.html (including profiles which describe ways POST works with farmers and ranchers)
12) Producing, Distributing, and Consuming Healthy Local Food: Ingredients for a Sustainable Food System, The San Mateo County Food System Alliance, 2012 http://aginnovations.org/images/uploads/SustainableFoodBrief_March_2012.pdf
13) San Mateo County General Plan
14) San Mateo County Crop Reports 2000 – 2011, San Mateo County Agricultural Commissioner
15) San Mateo County Agricultural Commissioner, Pesticide Use Permits 2012.
16) Santa Clara County Crop Data. Various reports and maps provided by Santa Clara County Department of Agriculture, May 2013.
17) Santa Clara County General Plan (1995-2010)
18) Santa Clara County General Plan 2014 Update, Health Element
19) Sustaining our Agricultural Bounty: An Assessment of the Current State of Farming and Ranching in the San Francisco Bay Area, 2011. American Farmland Trust, Greenbelt Alliance and Sustainable Agriculture Education.
20) Trends in U.S. Farmland Values and Ownership, USDA, March 2012.
21) Triple Harvest: Farmland Conservation for Climate Protection, Smart Growth and Food Security in California, 2012. California Climate & Agriculture Network.
22) USDA 2007 Census of Agriculture

Initiatives and Plans Underway

- Agricultural Economic Development Investment Strategy Study. Commissioned by American Farmland Trust, to be completed by summer 2013
- Economic Contributions of San Mateo County Agriculture Study. Commissioned by the Agricultural Commissioner, to be completed by late May/early June.
- Agriculture Infrastructure in San Mateo County Study. Commissioned by Food System Alliance, conducted by Community Alliance with Family Farmers, to be completed by June.