



# Santa Clara Valley

## *Agricultural Plan:*

INVESTING IN OUR WORKING LANDS  
FOR REGIONAL RESILIENCE: APPENDIX



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January 2018  
County of Santa Clara  
Santa Clara Valley Open Space Authority

**FINAL DRAFT: JANUARY 03, 2018**





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## APPENDIX A:

### RELEVANT PORTIONS OF SANTA CLARA COUNTY'S GENERAL PLAN POLICIES AND IMPLEMENTATION RECOMMENDATIONS THAT ADDRESS THE PRESERVATION OF AGRICULTURAL LAND IN SANTA CLARA VALLEY.

The Santa Clara County General Plan (General Plan) was adopted on December 20, 1994. Preservation of natural resources, including agricultural lands, and related industries, has been a fundamental goal of Santa Clara County policies since the 1970s. For lands outside city Urban Service Areas, the County maintains and enforces land use policies that preserve and protect open space and agricultural resources by limiting urban sprawl and maintaining stable rural land use policies. Santa Clara County has four primary rural land use designations – Exclusive Agriculture, Agricultural Ranchlands, Hillside, and Rural Residential. The County maintains General Plan designations and zoning for Valley agricultural lands that limits the type of land uses allowed in agricultural lands and precludes subdivision into lots smaller than 20 or 40 acres. The General Plan also recognizes that the agriculture industry faces a number of challenges, including an ongoing potential for conversion to urban uses, high land costs, and the lack of affordable agricultural worker housing.

#### **Relevant portions of the General Plan (excerpts from Resource Conservation Chapters, Books A & B, Agriculture & Agricultural Resources):**

##### **C-RC 37**

Agriculture should be encouraged and agricultural lands retained for their vital contributions to the overall economy, quality of life, and for their functional importance to Santa Clara County, in particular: a. local food production capability; b. productive use land not intended for urban development; and c. protection of public health and safety.

##### **C-RC 38**

General public awareness and understanding of the importance of agriculture and the goals of agricultural preservation should be encouraged countywide.

##### **C-RC 40**

Long term land use stability and dependability to preserve agriculture shall be maintained and enhanced by the following general means:

- a. *limiting the loss of valuable farmland from unnecessary and/or premature urban expansion and development;*
- b. *regulating non-agricultural uses in agricultural areas, and their intensity and impacts on adjacent lands;*
- c. *maintaining agriculturally-viable parcel sizes; and*
- d. *minimizing conflicts between adjacent agricultural and non-agricultural land uses through such means as right-to-farm legislation and mediation of nuisance claims.*

##### **C-RC 41**

In addition to general land use and development controls, agricultural areas of greatest potential long-term viability should be identified and formally designated for permanent preservation.

**C-RC 43**

Long term economic viability of agricultural activities shall be maintained and enhanced by providing

- a. *improved markets for locally-grown products;*
- b. *property tax relief;*
- c. *appropriate application of “renewable,” organic agriculture and other innovative, cost-efficient growing techniques; and*
- d. *adequate agricultural worker housing supply.*

**C-RC(i)19**

Evaluate the various means available for permanent protection of agricultural lands designated through inter-local agreements as official preserves, including:

- a. *transfer, purchase or dedication of development rights;*
- b. *cumulative impact mitigation fees (Sonoma, Alameda Counties’ programs provide examples);*
- c. *acquisition priority-setting by the County’s Open Space Authority;*
- d. *establishment of land trusts or land banking to hold ownership of permanently protected lands; and*
- e. *use of binding inter-local agreements between affected jurisdictions regarding the policies and implementation measures involved.*

**C-RC(i)22**

Marketing and educational programs to promote local agricultural products and industries.

**C-RC(i)23**

Production of safe, decent, and affordable agricultural worker housing.

**R-RC 59**

Sizeable remaining areas of agricultural lands shall be preserved in large parcels in order to:

- a. *stabilize long term land use patterns;*
- b. *allow for long term agricultural investment;*
- c. *facilitate entry of individuals into agricultural livelihoods; and*
- d. *avoid introduction of incompatible residential or other development in agriculture areas.*

**R-RC 60**

Recombining of parcels in agricultural areas should be encouraged.

**R-RC 61**

Allowable land uses in exclusive agricultural areas shall be limited to

- a. *agriculture and ancillary uses,*
- b. *uses necessary to directly support local agriculture, and*
- c. *other uses compatible with agriculture which clearly enhance the long-term viability of local agriculture and agricultural lands.*

**R-RC 64**

As the means and resources become available, agricultural areas of greatest long-term viability should be designated for long term or possibly permanent preservation from urban development. Areas such as the lands south and east of Gilroy should be considered for designation and preservation.

**R-RC(i) 24**

Evaluate the various means available for long term or possibly permanent preservation of lands designated as agricultural preserves, including:

- a. *transfer, purchase or dedication of development rights;*
- b. *cumulative impact mitigation fees (Sonoma, Alameda Counties' programs provide examples);*
- c. *acquisition by the County's Open Space Authority;*
- d. *provision of incentives to encourage preservation; and*
- e. *establishment of land trusts or land banking to hold ownership of permanently protected lands.*

**R-RC(i) 30**

Establish an agricultural competitiveness task force to:

- a. *identify changing conditions, challenges, and opportunities for local agriculture;*
- b. *identify conditions necessary to maintain the long-term viability of agriculture;*
- c. *recommend specific actions for enhancing the agriculture's long-term viability.*

Website links to reach Resource Conservation Chapters, Books A & B, Agriculture & Agricultural Resources: [https://www.sccgov.org/sites/dpd/DocsForms/Documents/GP\\_Book\\_A.pdf](https://www.sccgov.org/sites/dpd/DocsForms/Documents/GP_Book_A.pdf) & [https://www.sccgov.org/sites/dpd/DocsForms/Documents/GP\\_Book\\_B.pdf](https://www.sccgov.org/sites/dpd/DocsForms/Documents/GP_Book_B.pdf).

# APPENDIX B:

## LIST OF ADVISORS AND TECHNICAL PANEL MEMBERS

### ADVISORS' GROUPS

<b>AGRICULTURAL CONSERVATION EASEMENT ADVISORS' SUB-GROUP</b> Moderator: Andrea Mackenzie	
Name	Title and Agency
Chris Kelly	CA Program Director, The Conservation Fund
Darla Guenzler	Executive Director, Wildlife Heritage Foundation, former Executive Director, CA Council of Land Trusts
Jeff Stump	MALT Conservation Director, experienced with designing affirmative easements for farmland and recent experience with securing SALC funding for an ag. easement project.
Nancy Schaefer	Bay Area Program Manager, California Rangeland Trust
Tom Scharffenberger	Private Agricultural Conservation Easement Consultant
Craige Edgerton	Former Executive Director, Land Trust of Santa Clara Valley
Kathryn Lyddan	Assistant Director for the Department of Conservation's Division of Land Resource Protection (Former Executive Director, Brentwood Agricultural Land Trust)

<b>FARMING ECONOMICS AND VITALITY ADVISORS' SUB-GROUP</b> Moderator: Joe Deviney	
Name	Title and Agency
Dave Runsten	Policy Director, Community Alliance with Family Farmers (CAFF)
Ed Thompson	Executive Director, American Farmland Trust (AFT)
Serena Unger	Policy Associate, American Farmland Trust (AFT)
Jim Leap	Agricultural Advisor, Mentor and Educator
Reggie Knox	Executive Director, FarmLink
Mika Maekawa	Central Coast Regional Program Coordinator, FarmLink
Justin Fields	Rancher and President of Santa Clara County's Cattlemen's Association
Sibella Kraus	President, Sustainable Agriculture Education (SAGE)
Stephen Hohenrieder	Private equity investor - integrated food systems and agricultural enterprises
Stephanie Moreno	Executive Director, Guadalupe Coyote Resource Conservation District
Kevin O'Day	Rancher, Former Santa Clara County Agricultural Commissioner
Marianna Leuschel	Principal, L Studio
Duncan MacEwan	Principal Economist, ERA Economics



<b>LAND USE PLANNING AND POLICY ADVISORS' SUB-GROUP</b>	
Moderator: Rob Eastwood	
<b>Name</b>	<b>Title and Agency</b>
Bill Keene	General Manager, Sonoma County Agricultural Preservation and Open Space District
Brian Schmidt	Program Manager, Greenbelt Alliance
David Morrison	Planning Director, Napa County (Former Planning Director, Yolo County)
David Shabazian	Rural-Urban Connections Strategy Manager, Sacramento County Council of Governments (SACOG)
Don Weden	Former Santa Clara County Planning Principal Planner
Eli Zigas	SPUR Food and Agriculture Policy Director
Jeanne Merrill	Policy Director, CA Climate and Agriculture Network (CalCAN)
Neelima Palacherla	Executive Officer, Local Agency Formation Commission (LAFCO) Santa Clara County
Pete Parkinson	Former Planning Director, Sonoma County

**TECHNICAL PANELS**

<b>FARMING AND FOOD SECTOR PANEL</b>	
<b>Name</b>	<b>Title and Agency</b>
Aparna Gazula	UCCE Santa Clara County - Small Farm Advisor
Bill Chiala	Long-standing Farmers - Chiala Family
Erin Gill	Grass Farm Business Owner; President, Santa Clara County Farm Bureau
Greg Leonard	Santa Clara County Food Systems Alliance
Janet Burback	Owner - Tilton Ranch; President Santa Clara County Farm Bureau
John Telfer (Morgan Hill)	Realtor, South County farmland
Julie Hutcheson	Santa Clara County Food Systems Alliance
Pete Aiello	Usegi Farms Owner/President
Sam and Nick Thorp	Spade and Plow Farm Owners
Sheila Barry	UCCE Santa Clara County - Livestock and Natural Resources Advisor

MUNICIPAL PANEL	
Name	Department and Description
Anthony Eulo	Program Administrator, City of Morgan Hill
Brian Mendenhall	Project Manager, Water Resources Planning and Policy Unit
Jared Hart	Supervising Planner, Long Range Planning, City of San Jose
John Baty	Principal Planner, City of Morgan Hill
Kristi Abrams	Community Development Director, City of Gilroy
Rebecca Tolentino	Interim Planning Manager, City of Gilroy
Samantha Greene	Assistant Water Resources Specialist, Santa Clara Valley Water District
Steve Rymer	City Manager, Morgan Hill

## APPENDIX C:

### ADVISORS' MEETINGS AND ADVISORS' GROUP MEETING NOTES

Meeting Date	Location	Presentation to
August 19, 2016	Webinar	All Advisors
October 11, 2016	Agricultural Commissioners' Office, San Francisco	Farming Economics and Vitality Advisors' Sub-Group
October 18, 2016	Webinar	Agricultural Conservation Easement Advisors' Sub-Group
November 8, 2016	Santa Clara County Planning Office	Land Use Planning and Policy Advisors' Sub-Group

## MEETING NOTES

### Farming and Economic Vitality Advisors Sub-Group

October 11, 2016

#### ATTENDEES

Serena Unger, Jim Leap, Andrea MacKenzie, Duncan MacEwan, Justin Fields, Stephanie Moreno, Joe Deviney, Amie MacPhee, Sibella Kraus, Marianna Leuschel, Kelsey James-Kavanaugh

#### INTRO/PURPOSE/BACKGROUND

- **Update:** Almost done with mapping of ag priorities (mapping greenhouse gases with ag today and then with build out), county starting to look at policies to add/strengthen as well as other counties like Sonoma, developing regional ag conservation program (purchase of easements etc), implementing the agreement in the plan
  - Need to finish by Sept 2017
  - What could work in Santa Clara County?

#### PUBLIC POLICY INNOVATIONS/MODELS

- High speed rail efforts
  - Urban growth and conservation program: work alongside high speed rail (Gilroy and Bakersfield), additional SALC funding, climate smart planning, provision of more scientific data, additional state funding (growth council and IPR)
  - Mitigation efforts for farm land
  - Economic impact from rail (3 different distances from rail)
  - Conservation easement → business opportunity, repackage conservation/mitigation
- Hudson Valley Agri-Business Development Corporation ([www.hvadc.org](http://www.hvadc.org))
  - 501C3
  - Lending arm and technical assistance arm
  - Received lots of money through federal funding from economic development agency
  - Running areas as small businesses, use of contracts → what would SC farmers need in contracts to be successful?
  - Similar to San Mateo, not as much development as Santa Clara County though
- Friends of the Greenbelt Foundation (Canada) [www.greenbelt.ca](http://www.greenbelt.ca)
  - 25 mil, 5 year spend down to protect farm land via easements and other conservation strategies

#### ECONOMIC DEVELOPMENT OPPORTUNITIES

- Food Works (San Jose)
  - What does food mean to San Jose on an economic level?
    - Largest growth in jobs in the food industry
    - Farming businesses interested in going in on the land together in terms of a whole sale market (10 acre facility)
      - Availability of staff/workers and cost biggest issue
  - Recommendations
    - Grow cities economy by investing in food jobs, supporting new, expand or relocated food business
    - Conduct a detailed feasibility study for a wholesale market

CAPP advisor's meeting  
 October 11, 2016

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- Improve quality of life and public health outcomes by increasing opportunities for all SJ residents to access fresh, affordable, healthy and culturally appropriate foods close to where they live and work.
    - Advance food as place making at city and neighborhood scales
    - Support development of commercial kitchens
    - Cultivate initiative and dedicate land for multi-benefit urban and peri-urban food production
    - Est. a food policy council and inter agency task force to coordinate and link with other city priorities, strategic efforts to improve SJ food system
  - Evaluating economic value of farming (ERA)
    - Ag – self-financing open land i.e. need to preserve certain amount space
    - Santa Clara County Ag
      - Urban development pressure
        - Self-financing open space
        - Moving up the value chain
      - Evaluation of alt land use
      - Evaluation of land use policy
        - Incentives
        - Tradable carbon credits
        - Must have economic frameworks that can evaluate alternative policies and demonstrate economic value
      - Economic model of Santa Clara (SC) County ag
        - Primary production
        - Revenues, costs, profits, cultural practices
        - Evaluate how the industry responds to changes in policy and other incentives
      - Input – output model of SC County
        - IMPLAN “multiplier model”
        - Link changes in farm production to all related industries
      - Positives
        - SC produces a set of healthy crops that are in high demand
        - New industries off the potential for growth
        - Sensible water management and reliable water supply relative to other regions
        - GHG cap and trade market is young and growing
        - Focus on value added
      - Negatives
        - Land use conversion
        - Policy, laws (Prop. 218)
        - Regulations
      - What is missing?
        - Ecosystem services & GHG’s

CAPP advisor's meeting  
October 11, 2016

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## **ENVIRONMENTAL/CULTURAL CONSIDERATIONS OF AG**

**Jim Leap, Stephanie Moreno, Justin Fields**

- Small organic farms are a critical link to education of farm land preservation
  - Already have some urban and educational farms in region (Martial Cottle park, Stanford student farm, Veggielution farm, live earth farm cottle)
- Lots of interest in using SC county land for farming but it is hard to get a hold of (“land is in limbo”)
  - Need ground models to pave the way for growers to get access to land
  - Having a successful working example would allow people to replicate and speed up process/make people more comfortable with using the land for farming
  - Focus on working lands more than just open lands
- Ground water has been well managed → don’t need to pump in water like other regions
- Need more land for ranchers
  - Cattle are positive because they fill the void of large grazers that once filled the area (positive for wildlife and land conservation)
  - Issue with outside of county ranchers coming in and taking land from local ranchers
  - Having a local rancher is better than an out of county rancher
  - Ranchers/farmers have a high average age so very set in their ways
    - Cattle ranchers have to pay but goat farmers get paid to graze
- Need to ask the local community more about what they want and what they need
  - Need to be a part of the policy planning if you want to get it right (local ranchers, local farmers)
- Young people DO want to get involved but need an advisor to show them the way
  - Better layout of benefits (need the benefits now rather than in 20+ years)
- Teaching ranchers and farmers about positive environmental practices helps them better their ranches and the land
- Stigma attached to getting subsidized by government funding (want to be able to do something for that money rather than feel like they’re getting it for nothing)

## **IMPORTANCE OF STORY TELLING – Marianna Leuschel**

- Importance of opening communication channels to the public so that they can support these efforts
- Telling a story helps build a sense of community and build a community around it
- How to engage the public?
  - Takes a lot of time to educate the public
  - High cost
  - Better to focus on bringing the frame work together and then bringing it to the public and asking them to help you implement it
- Going to the tech businesses to see where they get their food and trying to get them to get more of their food from local farmers and ranchers
  - Emphasize that by going local they help with preservation
- Why should the public care?
  - Create a demand
  - Benefits to public; Natural heritage
  - Creating county pride (example Yolo County)

## MEETING NOTES

### Agricultural Conservation Easement Advisors Sub-Group

October 18, 2016, 11:00 AM to 12:30 PM

Facilitators – Matt Freeman, Linda Kwong

#### ATTENDEES

Nancy Schafer – CA Rangeland Trust, Craige Edgerton – Silicon Valley Land Conservancy, Jeff Stump – Marin Agricultural Land Trust, Chris Kelly – Conservation Fund, John Lowry – Department of Conservation, Tom Scharffenberger – Conservation Planner/Consultant, Andrea Mackenzie – Santa Clara Valley Open Space Authority (OSA), Kathryn Lyddan – Brentwood Agricultural Land Trust

#### BACKGROUND

The Project Team is trying to identify and prioritize areas for ag easements where they can do the most good to meet the goals of the Sustainable Agricultural Lands Conservation (SALC) Program by curtailing sprawl to reduce GHG emissions, ensure long-term ag viability, and provide a suite of other co-benefits.

Interested in exploring regional program with shared vision working towards regional conservation priorities where the cities, county, OSA and other partners pool conservation investments into the same strategic locations.

County is revisiting policy tools, including zoning ordinance to reduce potential for or impact of development on ag zoned parcels to promote ag viability.

Santa Clara Valley Agricultural Plan has two areas of emphasis: Agricultural Conservation Easement (ACE) program complemented by strengthening of zoning

#### QUESTIONS FOR ADVISORS

**(Key takeaways from OSA facilitators and follow-up issues to explore are in bold.)**

- 1. In general, what are the necessary ingredients for a successful conservation easement program? What is the relationship between an easement program and a General Plan?**
  - Goals: **Instead of simply curtailing sprawl, project goals should focus on a vibrant ag economy.** Marin has strong support from Board of Supervisors and General Plan (GP) and has a great set of ag support organizations. Easement program supports that goal – does support curtailing sprawl, but Marin’s GP also doesn’t allow subdivision of ag parcels.
  - Brentwood Land Trust – formed with primarily a board of farmers that resulted in wanting a strong ag economy, not just to curb sprawl and protect open space. Dual mission – protect ag and support vibrant ag economy. Battle in Contra Costa has not been won – farmers are ambivalent. **Strongest way to build trust with farmers are ag enterprise programs. Ag easement program needs strong zoning and GP certainty to succeed. In east Contra Costa County, as long as cities want to push urban line into ag land, farmers don’t want to enter into easements. Need enough zoning and general plan certainty so farmers aren’t giving up that right.**

- Messaging important – tout how important ag. lands are important for food supply / community health as opposed to touting “threat of sprawl”.
- Has to be political will to make it happen at both County and City levels
- Battle in Marin was from 60-70’s, Marin Agricultural Land Trust (MALT) was created in 80’s. 3 of MALT’s board members were part of the original battle: **Talk to Ralph Grossi and Gary Giacomini (and other MALT founders about how CE program success was grounded in good land use policy – GP/Zoning in Marin County)**

**2. Are you aware of counties or regions that have implemented successful agricultural easement programs that would be good models for rapidly growing Santa Clara County?**

- **Marin, Sonoma, Contra Costa, Yolo County**
- **2000 Santa Clara County ACE Program is pretty thorough and has some lessons learned.**
- 2000 report was not implemented in regional basis. Silicon Valley Land Conservancy (SVLC) and OSA work independently. Good opportunity to dust document off and refine in 2016.
- “working regionally” – does that mean the region of Santa Clara County?
  - regionally = Southern Santa Clara County where there’s still opportunity to protect ag land (south of San Jose from the Coyote Valley south to Gilroy, including the horseshoe of rangelands that surround the valley floor). Regionally also means working across jurisdictions and coordinating with other partners within the region, including cities.

**3. Is a regional easement program the right approach vs. individual cities having their own plans? Are the two approaches mutually exclusive?**

- **One entity responsible for managing program in working with County and Cities (like HCP) – seems like great idea, but don’t know political realities - key is cooperation.**
- **What makes Santa Clara unique compared to other counties? Need to identify those.**
- Santa Clara County ag is quite different in pattern of ownership, etc. **Consider dividing the geography into three subareas, each with unique strategies tailored to the landscape / ownership patterns:**
  - **1) smaller cultivated ag with specialized crops on 10-20 acres; 2) South of Gilroy, where larger ag parcels are more connected economically to San Benito County; and 3) large ranches near the urban areas. Develop strategies for each.**
  - **South Gilroy floodplain lands don’t have as much development potential; contacted a lot of landowners previously that were not interested – perhaps for speculative reasons. Ownership patterns – a lot owned by non-local investors – in Morgan Hill, a lot of overseas investors. Find operator farmers/lessees to foster relationships as they want to be landowners.**

- **Marin's strategy is probably more applicable to rangeland**, with exception of their county going all in to protect ag land.
- **Look at the Peninsula Open Space Trust (POST) experience and their tools. Option to Purchase at Agricultural Value (OPAV) models to get land in hands of owners. Reach out to Noelle and team.**
- Lease vs own – Fewer farmers actually own land. Is there a built in function where you have somebody looking for who needs what rather than approaching it one farm at a time?
- South of Gilroy – people are happy to lease land. Larger companies sold lands and are just focusing on operations. Need to figure out who's interested in purchasing.
- **For ranchers – many have main home ranch but also lease as a big part of their operations.**
- Dispelling the misconceptions with easements and education on easements – is this a good investment of time?
- Reception is generally not very warm. A lot of skepticism. There's a lot of distrust of turning the operation over to someone else who would be making decisions for them. **ACE education program is something that needs to be addressed.**
- **Enlist farmers that have ACEs to educate others about benefits.**
- Mendocino Land Trust – had this conversation and ended up doing a couple transactions. Found it to be effective in a difficult environment.
- this was successful in the short-term – 1 easement acquired, 1 donated. Provided funding to land trust to do public engagement, slowed down after funding is spent. **Strong public support is necessary for goals and success of project – keep momentum up. Bring public to recognition of the value of farmland and rangeland**
- **What is the prevailing land value for Valley Floor properties and how does that compare to ag value?**
- **All comes back to certainty – as long as speculation is there with an elastic urban limit line and people will keep buying.**
- **need a firm and clear signal with immovable zoning policies in place.**
- **MALT came out of County downzoning from 10 to 60 in west Marin. This is partly what made MALT possible.**
- **"The Grand Bargain". County was considering downzoning even further but created MALT instead. MALT would not have success without this action.**
- Brentwood Ag Land Trust – it's been difficult because there's no local government support. They still have cities expanding and there is an urban limit line that requires a lot of vigilance to hold it.
- **ACE Program should have focus areas – high priority lands – if we do that, will have a viable ag land use. What's the cost? TDRs wherein those within the Priority Areas are compensated by those who must mitigate.**
- Because there are so many small parcels, it's hard to put together a viable zone but we should shoot for keeping the acreage the same it is now.



- County did ID areas south and east of Gilroy as ag preserve. But there may be a way to do a meaningful Transfer of Development Rights (TDR) within the cities to prevent further development. Zoning may be more effective than ACE Program.
- Brentwood mitigation program – adopted because of pressure from environmental groups. Has a TDR provision. Brentwood holds 2 10-acre easements that have TDRs allowing developers to build at higher density. Limited success because City of Brentwood refused to build high density. But that may be changing now. Link what we’re doing with sustainable community strategy – find areas where people agree there should be infill and higher density and link TDR to those areas (PDAs) where they could get approval.
- Include San Jose and Santa Clara – get them to see value in protecting farmland to south.
- **This links to importance of regionality and ability to do TDR over a region.**
- Mapping – we don’t want to overdo the mapping because we’ve lost so much so each acre of prime soil is irreplaceable. Looking at threat of development and GHG reduction. Looking for areas where easements would be most feasible and try to lock in the urban growth boundaries.
- **“Regionality” concept – works better on a larger countywide basis. The SALC program has 2 sides – ag conservation and affordable housing. SALC program itself is focused on both affordable housing as well as ag. land preservation – are there creative ideas to link these two? Green Belt Alliance (GBA) has done significant research that shows we have enough lands to grow within cities**
- **Comprehensive Plan – focus on most productive ag land – those that will be developed are where high density would be mandated / Plan should address how and where growth is possible**
- **Some of the solutions should look at bumping up densities within cities by transferring density from farmland / rangeland**
- problem with infill - areas have zoning that’s for low density housing. How do we change things to increase density in those areas? Through TDR program?
- **having a plan that addresses development pressure leads to a more durable plan that looking at ag in isolation.**

**4. *Other feedback and ideas about program administration and the most effective structure? Lessons learned from other areas?***

- **Ag mitigation fund must be held by qualified ag mitigation entity. In Brentwood (pro-development), changed ordinance that says they don’t have to spend ag mitigation funds on actual ag mitigation. Make sure money goes straight to conservation org.**
- **Consider something voter approved to prevent city from changing it. Ordinance and funding measure = stronger than County or City run program. Consider Polling in 2017 for Funding and a Voter-Approved Measure**
- **Measure A in 2012 in Marin – voter approved measure that sends money to county farmland program created through the measure. Maybe a funding and land use**

**measure. Would hesitate to send money to conservation entity without oversight and be careful on how oversight is created.** Funds going to county and entities apply.

- County lacks expertise on farmland
- Capacity concern, county looks to MALT for expertise. It's about to expire. Email Jeff to get a copy of the ordinance. Must have capacity and expertise.

**5. Can funding from multiple sources be blended? What funding sources should we consider?**

- BALT doesn't have the same fundraising base so they need to put together multiple sources of funding to reach 25% match for SALC. There was no additional funding from public sources.

**6. Are there particular easement provisions or language that we should include in easement templates to help achieve our objectives and/or reflect state-of-the-art thinking?**

**7. What have we missed? What other advice or feedback can you share?**

- What is the ACE Template that this program might embrace?
- **Protecting natural resource values, water quality should be included while not telling farmers how or what to farm. Even in affirmative easements, they use an ag management plan created by third parties that provide range and serves as a baseline. MALT works closely with County to have a common agreed upon joint model. Prevent "conservation shopping".**
- **Ensure that there's an overarching structure and common easement template so multiple actors can participate; include standards for stewardship. Also ties to mitigation so everyone plays by the same rules.**
- Different trust factors with different entities that would encourage working with one and not another.
- **Similar cost framework so one organization isn't undercutting another.**
- Standards for exertion over time. Part of the cost won't be equalized until zoning is equalized.
- Looking at overall picture of CAPP – there are 2 other subcommittees. How does this fit in and what's next?
- This is still early – other groups are looking at policy tools, best practices with general plan and zoning, economics. This will all come together into a draft report with draft recommendation which will be provided to advisors for feedback early on.
- Deliverable is evolving – by end of the process, poised to take set of ordinances/policies to BOS to put in GP. Easement program with common template. Marketing and awareness, creating demand among people in more populous areas to have this program succeed.
- Taking it to voters – what about funding mechanism to include into measure?
- Funding was not part of conversation but was acknowledged. Would love to see joint voter approved measure for growth boundary along with funding. Maybe we can start do polling to see public appetite for this kind of program.
- They were able to get funds for mitigation through transportation sales tax measure in Contra Costa.

- County did ID areas south and east of Gilroy as ag preserve. But there may be a way to do a meaningful Transfer of Development Rights (TDR) within the cities to prevent further development. Zoning may be more effective than ACE Program.
- Brentwood mitigation program – adopted because of pressure from environmental groups. Has a TDR provision. Brentwood holds 2 10-acre easements that have TDRs allowing developers to build at higher density. Limited success because City of Brentwood refused to build high density. But that may be changing now. Link what we’re doing with sustainable community strategy – find areas where people agree there should be infill and higher density and link TDR to those areas (PDAs) where they could get approval.
- Include San Jose and Santa Clara – get them to see value in protecting farmland to south.
- **This links to importance of regionality and ability to do TDR over a region.**
- Mapping – we don’t want to overdo the mapping because we’ve lost so much so each acre of prime soil is irreplaceable. Looking at threat of development and GHG reduction. Looking for areas where easements would be most feasible and try to lock in the urban growth boundaries.
- **“Regionality” concept – works better on a larger countywide basis. The SALC program has 2 sides – ag conservation and affordable housing. SALC program itself is focused on both affordable housing as well as ag. land preservation – are there creative ideas to link these two? Green Belt Alliance (GBA) has done significant research that shows we have enough lands to grow within cities**
- **Comprehensive Plan – focus on most productive ag land – those that will be developed are where high density would be mandated / Plan should address how and where growth is possible**
- **Some of the solutions should look at bumping up densities within cities by transferring density from farmland / rangeland**
- problem with infill - areas have zoning that’s for low density housing. How do we change things to increase density in those areas? Through TDR program?
- **having a plan that addresses development pressure leads to a more durable plan that looking at ag in isolation.**

**4. Other feedback and ideas about program administration and the most effective structure? Lessons learned from other areas?**

- **Ag mitigation fund must be held by qualified ag mitigation entity. In Brentwood (pro-development), changed ordinance that says they don’t have to spend ag mitigation funds on actual ag mitigation. Make sure money goes straight to conservation org.**
- **Consider something voter approved to prevent city from changing it. Ordinance and funding measure = stronger than County or City run program. Consider Polling in 2017 for Funding and a Voter-Approved Measure**
- **Measure A in 2012 in Marin – voter approved measure that sends money to county farmland program created through the measure. Maybe a funding and land use**

**measure. Would hesitate to send money to conservation entity without oversight and be careful on how oversight is created.** Funds going to county and entities apply.

- County lacks expertise on farmland
- Capacity concern, county looks to MALT for expertise. It's about to expire. Email Jeff to get a copy of the ordinance. Must have capacity and expertise.

**5. Can funding from multiple sources be blended? What funding sources should we consider?**

- BALT doesn't have the same fundraising base so they need to put together multiple sources of funding to reach 25% match for SALC. There was no additional funding from public sources.

**6. Are there particular easement provisions or language that we should include in easement templates to help achieve our objectives and/or reflect state-of-the-art thinking?**

**7. What have we missed? What other advice or feedback can you share?**

- What is the ACE Template that this program might embrace?
- **Protecting natural resource values, water quality should be included while not telling farmers how or what to farm. Even in affirmative easements, they use an ag management plan created by third parties that provide range and serves as a baseline. MALT works closely with County to have a common agreed upon joint model. Prevent "conservation shopping".**
- **Ensure that there's an overarching structure and common easement template so multiple actors can participate; include standards for stewardship. Also ties to mitigation so everyone plays by the same rules.**
- Different trust factors with different entities that would encourage working with one and not another.
- **Similar cost framework so one organization isn't undercutting another.**
- Standards for exertion over time. Part of the cost won't be equalized until zoning is equalized.
- Looking at overall picture of CAPP – there are 2 other subcommittees. How does this fit in and what's next?
- This is still early – other groups are looking at policy tools, best practices with general plan and zoning, economics. This will all come together into a draft report with draft recommendation which will be provided to advisors for feedback early on.
- Deliverable is evolving – by end of the process, poised to take set of ordinances/policies to BOS to put in GP. Easement program with common template. Marketing and awareness, creating demand among people in more populous areas to have this program succeed.
- Taking it to voters – what about funding mechanism to include into measure?
- Funding was not part of conversation but was acknowledged. Would love to see joint voter approved measure for growth boundary along with funding. Maybe we can start do polling to see public appetite for this kind of program.
- They were able to get funds for mitigation through transportation sales tax measure in Contra Costa.

## MEETING NOTES

### Land Use Planning and Policy Advisors' Sub-Group

November 8, 2016, 1:00 PM to 3:00 PM

Facilitators – Rob Eastwood and Manira Sandhir

#### ATTENDEES

Bill Keene, Brian Schmidt, David Morrison, David Shabazian, Don Weden, Eli Zigas, Jeanne Merrill, Neelima Palacherla, Alex Hinds

#### ABSENT

Pete Parkinson

#### INTRODUCTION

Three components of the plan: Agricultural Conservation Easement (ACE), Land Use Policy - Stronger Regulatory Framework, Farming and Economics Vitality (including Ag marketing)

#### ICEBREAKER QUESTION:

#### Q. What is the biggest challenge you've faced for Agricultural (Ag) Preservation?

- Even though land is available for development within Urban Growth Boundary (UGB) of cities, cities want to expand out. Santa Clara Local Agency Formation Commission (LAFCO) continues to receive applications from cities (including San Jose, Morgan Hill and Gilroy)
- In Napa: Is there buy-off from the cities? Cities outnumber the population of outlying areas. Majority of voters don't support farmland preservation.
- American Farmland Trust and California Agricultural Partnership Forum (CAPF) introduced 2 bills. Bill 1 would have required a farmland mitigation program - with a % of land in working Ag. A threshold. Faced opposition from building industry, County and City government. Follow-up Bill 2 - focused on planning for providing resources to governments on protecting Ag land (info on best use of Ag land, protecting unique and special Ag land). For land trusts/ACE - Funding is key.
- Citizen interest in preserving Ag is more substantial than the farmers themselves. Farmers are not mobilized to express concerns.
- City of El Centro – proposed Community separator in Imperial Valley – expensive. Can be intensive. San Luis Obispo. Consider how agriculturalists think and what their needs are? They don't like the term Ag Preservation, more inclined to support Ag Viability.

- Joint studies - nice words don't always lead to actions.
- Hard to get farmers on board - waiting for UGBs to be put in place, others doing well so they don't need any help.
- Many Land Trusts interested in ACE. No funding. Farmers feel helpless, they do need help.

**Q1: What can Counties do by themselves, with LAFCO support? What tools can they use?**

- Education is important. Not like southern California, we need to do things to make sure that value is maintained. Fresno County- mid 1990s, suggested tax on annexation - 17 cities said no. Fresno County refused to approve any annexations for the next 4 years. Soft approach - target development within cities, educate them about why this is important. To get cities on board City-County Voluntary agreement required - be a partner on the table
- Alameda county Transportation Authority - current Plan Bay Area - implementation being urged - ABAG/MTC condition open space protections. LAFCO - environmental review done by cities.
- Spirit of collaboration with cities required - what do their constituents need for open space preservation? Combine this with regulation in terms of land development and transfer of development rights, etc.
- Water Districts prefer urban and developed land as infrastructure and service works out to be more efficient. Example East Bay MUD policy.
- Sonoma County - keeping Williamson Act in place plus UGBs for each city - large victory
- What do you mean by Agriculture (define Ag)? What's the County's average farm size? What kind of agriculture is practiced?

**Q2: Best way to preserve Ag when parcels are small?**

- In San Luis Obispo – TDR programs cluster development. In Marin - only get a certain size house in Ag areas. For bigger houses, you could provide some amenity good for Ag, such as Ag processing facilities/ or mitigation through easement protection, either on site or off site. Stewardship - contribution to riparian protection or erosion control. Political struggle - Larger houses for legacy farmers - farmworker housing, or additional dwellings etc. On much larger parcels - not 5 acre lots. Prevent big houses. To subdivide Ag land - need a finding that you had to improve agriculture if subdivision has to take place.

- Strip away development attraction of Ag lands. Yolo County 40 acres minimum - people were looking for underlying lots to be able to develop, not so in Napa. Had to show subdivision is supportive for Ag 50 acres. 3500 sq ft house, anything larger, needs a Use Permit - never codified. Napa County - establishing a maximum footprint for residential development. Regulation impinges on private property rights - farmers may not have cash, land is their retirement account. Short-term rentals are using up housing accounts. Clustering Ordinance – 8/10/20 acre lots, you could adjust lot line- do 3 for development, remaining lots for conservation easements (same owner to keep it simple). TDRs - sending and receiving areas became controversial, was not successful.
- small-scale Ag should also be given recognition – high income produce, organic farms and nurseries can also be successful. Challenge is getting access to land. Establishing improved land tenures, local government could facilitate connections between the land owner and farmers. Access to land is a key issue. Rural Ranchettes to develop successful small-scale farmer. Practice farming on someone else's lands - be able to farm without owning the land. Farmer Veteran Coalition based in Davis? - Veterans wanting to farm. Can the County facilitate those connections for new farmers? Grant and funding available to create successful programs.

### **Q3: Helping people use smaller parcels**

- Include an Ag education component –High regulation on use of Ag land use for non-ag, eg church. You don't get to do that unless you have an equal Ag use - accessory to the Ag.

### **Q4: Deregulating Ag uses or Ag related uses**

- list all the regulations and agencies you deal with? And can go through that list to look specifically at things that could have better development standards that don't need permits. Carry out this process with farmers.
- having a farmbudsman to help farmers with processes.
- wine district zone - reduced requirements for small-scale wineries. Not farming, has become more like commercial tourism - need something to carry them along. Ag Project Manager Approach - applicants and all the agencies involved, to prioritize Ag related projects. Expeditor- get real.
- Farmworker housing - market issue, not a regulatory issue. Having to evict renters - can be an issue - 60 days to leave, children in those houses is not a safe environment, thus health insurance premium hard. Affordable Housing program and the SALC

program. Living in cities. Napa County - winery footprint size - can't exceed 20 or 20% of the parcels. Only 40% of that can be non-production.

#### Q5. Mitigation ratios - beyond 1:1?

- Contra Costa LAFCO is considering 3:1 for mitigation.
- SCC 2007 - recommended 1:1.
- Napa: doesn't have Ag mitigation. San Joaquin County - had more than 1:1. Not contested yet. Yolo - 2:1 mitigation, All Ag land had to be mitigated (even land with poor quality soil since that too can produce high yielding crop) Residential - allowed use, shouldn't have to mitigate. Rural Ranchettes - could you mitigate for that? Interesting. Marin - is different though, all houses above a certain size had to mitigate. Other places may decide to litigate. Do an Ag viability analysis?
- Great ideas if people consider Ag as high value and want to invest in food-systems. Harder to see Ag viability and value when people live close to urban areas. Create market demand - clear market channels so those farmers can thrive. To put overlays onto high priced land for this purpose - will only be valued if they command high value crops and can contribute to the Ag economy. Figure out how to make money off the Ag land you preserve. Redefine the market - If Subdivision cost is high – owner will then think – What else can I do with this land? Job base - depends on land and productions. Hitting people in that wallet.
- (SACOG's Yuba County Case Study responded to requests from Yuba County Supervisors to employ tools developed as part of the Rural-Urban Connections Strategy on the existing agriculture industry. In working with the supervisors, farmers, county staff and other stakeholders, SACOG analyzed a range of agriculture scenarios to examine existing and potential future agriculture value in the county associated with production and food processing <http://www.sacog.org/post/yuba-case-study> ) Co-benefits - is there any way to connect urban areas to rural areas? Could you create a local carbon mitigation program, groundwater protection fees, regional market - connecting urban and Ag - added ecological value? "Take away the Ag jobs and groundwater for a week and see what happens??"
- carbon sequestration - Healthy Soils Initiative. Diversity of strategies.
- Yolo County promoting Ag ecosystem, assume a vow of poverty to do that. Has to cap - that development potential is completely taken away/significantly reduced. Needs a lot of political will - this needs education. Get the public/population behind you. What things can be done differently that can be quantified for GHG and other environmental co-benefits - carbon sequestration.



**Q6. Who else should we be talking to? Anything we missed?**

- Next generation of farmworkers - Difficult to buy-in. Expensive business to get into - perhaps there is some way to facilitate that next gen of farmers.
- Mitigation ideas - strategic investments in the food and Ag systems. Eco-system service approach for farmers. Markets that can facilitate this.
- Alternatives - low interest financing mechanisms - Cal Farm Link - would be good to connect to Reggie Knox.
- Look at Ag infrastructure – USD. eg butchery - the only other place 200 miles away. Network of businesses are vital to supporting farming. If there's farmland but nowhere to acquire tools, material, etc. it won't be able to support economic needs – Ag death spiral.
- Ripple effect of Ag- Tripod in Napa – Wine industry needed by county. Ag needs cities to provide housing services etc. Cities need wine and Ag. It's a symbiotic relationship - where workers live, and kids go to school. They are interdependent.
- Is Ag relevant to office workers? The major demographic in the area of study.

## APPENDIX D: TECHNICAL PANEL MEETINGS AND MEETING NOTES

Meeting Date	Location	Presentation to
November 11, 2016.	Santa Clara County Farm Bureau	Farming and Food Sector Panel & Municipal Panel
February 8, 2017	Santa Clara County Farm Bureau	Farming and Food Sector Panel & Municipal Panel
June 19, 2017	Santa Clara County Farm Bureau & Morgan Hill City Hall	Farming and Food Sector Panel & Municipal Panel
October 30, 2017	County of Santa Clara - South County Offices	Farming and Food Sector Panel & Municipal Panel

## Technical Panel Meeting Notes

Santa Clara Valley Climate & Agriculture Protection Program  
 Wednesday, February 8, 2017 | 11am to 3pm  
 Santa Clara County Farm Bureau | Morgan Hill, California



### Meeting Objectives

1. Introduce draft mapping and analyses, share lessons learned and a summary of key findings to-date
2. Hear and record reactions, identify high-priority areas for action and opportunities for improvement
3. Get ongoing TP member buy-in and enthusiasm for CAPP

### Meeting Summary

After hearing introductions from TAC members and project staff, the group received Rob Eastwood's presentation on the initial findings from the GIS mapping and analysis process undertaken as part of the CAPP project. A link to this presentation is at the end of this report.

### Tech Panel Input: Questions and Reactions

After hearing the presentation, TAC members were asked for their reactions to the data provided. Specifically, they were asked if the initial findings captured the dynamics in the county. What might have been missed and what should be highlighted as particularly important? Members responded with these comments and questions:

- Question: Do the presented **conversion trends** only look at the South Valley?
  - Answer: The focus is Coyote Valley south down to the border/valley floor/bordering rangelands. All stats generally focus here.
- Question: What is the **definition of conversion**?
  - Answer: If someone bought a 10-acre lot that was completely covered in row crop and used some of land to build a house, this would be counted as a conversion.
- Question: What if they were still farming on the lot?
  - There's a break point where the state goes out and maps where the house is built- there is a certain density that leads to the conversion on maps from agriculture to "other."
- Question: What are some of the **drivers of conversion**?
  - Williamson Act: Several parcels were registered it that shouldn't have been. County isn't renewing those properties, so this is a factor as well.
  - Economic cycles and conversions post-2008. Huge boom in late 90's with cities filling out was a factor. Spike in 2005/06 maybe a residual of that? Lag in development.
- Question: What **mapping info is being used** from the state? What about prime farmland areas that have been developed? Maps haven't caught up yet- 2-year lag.
  - Answer: We believe we are using the most current maps. We do not know the answer to what prime farmland areas have been converted.

### INPUT BY CATEGORY/ISSUE AREA

Input focused primarily on the following dynamics/issues:

- **Small Parcel Viability:** It's important to preserve and aggregate larger parcels while also time utilizing smaller parcels to the extent possible. There are significant questions around the economic viability and regulatory environment of small parcel ag, but they are seen as adding to a growing demand for local food production.
- **Land Ownership:** Absentee ownership of local agricultural land has significant impacts on the utilization, production, and overall management of that land.
- **Urban/Rural Environments & Conversions:** Conversions are increasing, residents are building homes on larger lots, farmland continues to be lost, and city annexation practices play a significant role in the loss of ag land.
- **Ag & Economic Viability:** In order for agriculture to remain in SCC, we must ensure its economically viability, and support the development and inclusion of new farmers.

- **Regulatory Environment & Potential Initiatives:** Government regulation has a role in local ag viability. There are regulatory barriers to local production/sales, and new ordinances could encourage local purchasing.
- **Water & Natural Resources:** Local food production has a complex but co-beneficial relationship to water and natural resources that should garner ongoing attention.
- **Farm to Market:** Improved infrastructure, coordination, and access to farmers markets are needed.

## RAW INPUT

### SMALL PARCEL VIABILITY

**Sentiment:** It's important to preserve and aggregate larger parcels while at the same time utilizing smaller parcels for ag to the extent possible. There are significant questions around the economic viability and regulatory environment of small parcel ag, but they are seen as adding to a growing demand for local food production.

- **How does it work in overall sustainability model for ag for the region? Perhaps we should band areas together to make bigger parcels. These are the types of things for the group to consider - how does it work as a whole?**
- How is it viable for the area? Economics works against it being a viable source of ag. Most prolific at that level are Chinese growers - cut flower groups, greenhouses, growing vegetables on 2-5 acres with family and selling to the SF market. In practice, the conditions that farmworkers and families must endure on this scale do not constitute a lifestyle many would take on. Wages are low, workers live on-site in small quarters, etc.
- Big question about **viability of very small parcels**. The FSA is working on this now. Support idea of aggregating small parcels and what you can build on from there a solution. Coyote Valley, Morgan Hill, and Gilroy are very different and might not share common solutions.
- How will new **regulations impact being able to farm smaller parcels**? Are we wasting our time/effort on this as the state keeps regulating farms more and more?
- **Small Ag Parcels:** Don't mistake this conversation to say that the ag community is against small ag operations. We're not. All of us in ag need to pull on same rope because we've got an exponentially growing population and need to grow food for it. **We need all hands on deck**. Let's support the largest diversity of types of farms. But it's a challenge to do this in between homes and daycares and hospitals and school and traffic. **Need more aggregate land** in one place. We should focus on where land is available and in one spot. But I wanted to underscore that we're not against doing 2-acre boutique farm if it's feeding people.
- Sentiment that it's important to preserve and aggregate larger parcels while at the same time utilizing smaller parcels for ag to the extent possible would be beneficial.

### LAND OWNERSHIP

**Sentiment:** Absentee ownership of local agricultural land has significant impacts on the utilization, production, and overall management of that land.

- Many neighbors are **absentee owners** - ½ to 19-acre lots. Absentee owners buy land as a long-term investment, thinking development will happen and make money one day. They are comfortable sitting and waiting.
- A large percentage of ag land is **farmed on a tenant basis** (several farmers chimed in with their own stats)
- Ownership of property often isn't local. Investors from outside the area buy property because Silicon Valley area looks like good investment - ownership from China and Singapore as examples.
- What's grown in Coyote Valley is more temporary in nature. This is due to farmers having **year-to-year leases**.
- Do we understand **owner operated vs. leased land** as it relates to land use patterns?
- **Speculative value** of land is with real estate and investment companies around the world. Land owners are not always a part of the ag community and bring a separate set of trade offs. By preserving this land for Ag, the "losers" aren't local farmers but investors? Could be characteristic of this area that sets it apart.
- Interesting speculation to see **land use prior** perhaps to the Outlet Malls - and periphery of Gilroy prior and post stop line. Also high-speed rail...

### URBAN/RURAL ENVIRONMENTS & CONVERSIONS

**Sentiment:** Conversions are increasing, residents are purchasing and building homes on larger lots, farmland continues to be lost, and city annexation practices play a significant role in the loss of ag land.

- **Urban/Rural interaction:** Rural areas seeing more traffic, people want to escape to a more rural lifestyle, but don't realize everything that comes along with that. Moving equipment is difficult with increased traffic. South & North County have different issues.

- Morgan Hill: **Small parcels ownership is almost exclusively absentee owned.** Community might want farming, but the economic challenge is with these speculative owners. Branding won't help here- dollars speak.
- Rural Conversions presented an interesting number.
- **Cause and effect;** what's happened; will allow us to know how to proceed.
- The **desire for annexations has not diminished,** and by not allowing cities to expand, this demand doesn't go away. It pushes city residents towards ranchette lots, and this is perhaps why we see the increase in conversion.
- Increased residency within the city could have been absorbed within city limits via **greater density.**
- 2010-16 has seen only 10 acres for annexation from Coyote Valley to Gilroy. This successfully prevented large cities from expanding further. It's also why you see **larger homes on 5-10 acre parcels.**
- Farming in Morgan Hill isn't going to do what larger growers/processers are. **Regions are going to be different.**
- Annexing from Morgan Hill or Gilroy out - if cities annex farmland, are they going to keep that in farming? How do we deal with new people moving in who don't understand ag?
- **Replacing one kind of development with another still means loss of farmland.** San Jose annexations are different than South County: lots of island annexations there.

### AG & ECONOMIC VIABILITY

**Sentiment: In order for agriculture to remain in SCC, we must ensure its economic viability, and support the development and inclusion of new farmers.**

- If ag is going to be viable, we need to create something to make it economically viable to farm. Instead we keep passing regulations down on farms (having to send notifications to schools when farmers will spray)
- **New Farmers.** The American Farmland Trust CEO recently held an open conversation across country - one of the issues was new farmers, and where to find them. New farmers are often thought of as having a fantasy about farming, with no clue or staying power in long run. AFT ran a program helping them (access to land biggest problem): out of 122 only 1 not still farming after the program. Education programs eventually have to further all of this. **Potential for incubator farms for new farmers.** [Coyote Valley Ag Feasibility Study](#)
- Is the **goal here to create larger viable production ag lands?** What does that mean to the city in terms of limits to **growth and sufficient business opportunities** and jobs and housing?
- Landowners who own farmland farm it as long as can, but then might want to **sell it for retirement.** We might be interrupt this cycle by asking the landowner to keep farming forever? Agriculture won't exist if not supported. Price for processing vs. fresh market is different, but either way you have to **produce** a lot of food to be **viable.**
- There's **no back up structure** - the farmer must produce the commodity. If you don't have a **support structure** and something happens, the farmer will fade away and whoever owns the property will find someone else who wants the property or make it something else like a ranchette.

### REGULATORY ENVIRONMENT & POTENTIAL INITIATIVES

**Sentiment: Government regulation has a role in local ag viability. There are regulatory barriers to local production/sales, and new ordinances could encourage local purchasing.**

- How do we make ag more viable without providing massive subsidies?
- **Urban Ag:** Example of [Urban Agriculture Incentive Zone program in San Jose.](#) Urban and small scale, but important in terms of education. **Awareness and education are needed** for North County. Might be a tool for this connection and eventually drawing people out to "real" ag in south county.
- **Schools and Regs:** School district in Morgan Hill wants to purchase land in SE quadrant. If trying to aggregate land there and continue farming, how does this impact it? Let's look at these **regulatory** questions more.
- Should the board of supervisors pass **ordinance that x % of local produce must be represented at local institutions?** Larger farms often already have food safety in check and are easily accepted by institutional buyers.
- Perhaps we need to get a **percentage of local food stands/markets** to adopt a certain percentage of what's produced in the county. County farmers should have some preference at county markets?
- We don't want any more regulation! The trend is to bring local produce in and advertise it as such. This will come but can't/shouldn't regulate it in.
- **Government regulation** not highlighted - this issue is right up there at the top with labor and water!

### WATER & NATURAL RESOURCES

**Sentiment: Local food production has a complex but co-beneficial relationship to water and natural resources.**

- South County: We **own and maintain our own wells;** are a large **benefit to water,** why our rates are lower.

- The protection of water resources is our mission. We are not looking at ag lands as a problem. We're concerned about development, and working with the Open Space Authority on Coyote Valley.
- **What other benefits come from not developing lands?** Does protecting water mean protecting the stream - and creating a buffer throughout rural areas? Ideally you see green along streams - we'd love to see that, and it's still possible in Coyote Valley and parts of Morgan Hill and Gilroy. **We'd like to work to help do that by showing multiple values of open spaces.**
- DWR is **interested in programs on water use efficiency on farms, and water quality** considering pesticide applications. Interested in co-benefits ag lands can provide.
- All of this will impact a **need for water**.
- Additional **co-benefit to water** provided by ag is that we're giving the consumer their water back via the produce.

## FARM TO MARKET

Sentiment: Improved infrastructure, coordination, and access to farmers markets is needed.

- **Shortcoming in some of the infrastructure.** At the Morgan Hill farmer's market most farmers are from the Central Valley and not local to Santa Clara County. Climate plays a role, but what to grow is also choice farmers make. Farmers will choose to produce crops that will work well for their specific situation. .
- **Market managers dictate** what they want and can make it difficult for the farmer to get into a market. There might be farmer's markets around, but if the farmer isn't growing what market manager wants, or someone else is already providing it at the given market, then the farmer may not have a way in to their local farmer's market.
- **Access to local farmer's markets:** I Farm right off of highway 24- and have approached Gilroy, Morgan Hill, and other markets. We grow a lot and have been treated rudely by market managers. There is actually a large chunk of time when we're producing what these managers want. Markets have lots of people providing range of products - we're viewed as a "big evil corporate farm corporation." I just want to be involved with community. We value being members of the community and want our reputation to reflect this. It's not about the money. It's about being a local producer and participating on a micro level in the community.

## Tools for Ag Viability and Climate Protection

At this point the group heard a presentation from Aimee MacPhee from Cultivate, on strategies for ag viability. This information synthesized interviews conducted by project members with ag viability leaders around the state.

## Tech Panel Reactions

Questions & Reactions: What tools make the most sense for Santa Clara County?

- **Marketing as a solution** rather than more regulation is great! Would like to see specifically where lands are and more depth into how terms are implemented?

## QUICK POLL, WHICH TOOLS REALLY STICK OUT?

- **Conservation easement +1**
  - Given land values can this work?
  - Challenge in how to separate property right from development right. Land values here are much different than Solano or Yolo for example.
- **Ag tourism (wineries) +1**
- **Branding (awareness), market access +3**
- **General Plan w/Ag Element**
  - Means you can't ignore Ag when planning/dev.
  - Benefits of having open space, and ecosystem benefit?
  - Look at Morgan Hill and what they've done. Mitigation program?
  - Morgan Hill is voluntary by developers (not pure mitigation). Developers use mitigation as a tool in competing against other developers. Used to feed funds into program.
- **Ecosystem Services Markets**
  - Diversity of flora, fauna. What we do with butterflies in the region.
  - JM: Successful markets for ecosystem services? Any case studies for this? Only have 1; AB32 cap and trade program; now only market is regulatory for wetlands and species; [Open Space Authority Ecosystem study](#)
- **Infrastructure** (aggregation)

## OTHER THOUGHTS ON AVAILABLE TOOLS

- Need a **diversity of tools** – needs might be different in each sub region
- **What time frame should we be thinking in terms of?**
  - Those speculating on value of land are willing to wait significant periods of time.
  - As a planner, 25 years. Look at Napa as an extreme example, decided in 1980's to invest and protect. Values there now 5x what neighboring counties have. Builds value over time.
- **Labor** isn't included/listed – should be
- **Political Realities/Constraints:** Inform county decision-makers to **improve General Plan**
  - **Decision Making** - it's important that farmers have a say via someone who can impact Board
  - If we want to change the GP, the make-up of the constituency of elected officials must change
  - **Board of Supervisors** we have now is more active on this issue from what we've heard. Awareness/education component is necessary for this before getting to policy tool.
  - Our Board wants the county to do a major policy shift in protection of unincorporated lands.
  - **Presenting a triple bottom line of conservation, ag viability, and climate mitigation** will be very attractive to the board. They want it to reflect what South County will want, though – must be vetted
  - **Educate** decision-makers; bringing a program (Santa Cruz) to introduce decision-makers to what we do (Food System Alliance) and how we do it, why we exist. Will be marketing soon and trying to get others to join in. Assembling it now. Ag Leadership program.
- **How do you change the way the system works from a zoning or planning policy perspective?**
  - As a grower on leased land, if the property is sold I don't have a say in it. The landowner (or trust) might need access to that asset value. Figuring out this piece is key.
  - Farmer's 401k is tied into land - it's generally sold for the highest value, we often lose farming on that land. How do we make sure compensation is happening without having to sell the farm?
  - Transfer of Development Rights (TDRs) and conservation easement programs are important.
- **Ag preservation programs to keep land in agriculture.** People growing on small parcel with house living on site: need to have infrastructure for these smaller parcels.
- What is land **ownership dynamic** for Capay Valley?
  - Not sure: 23 got together, bigger farming community around that. Yolo planning director said about 23 farmers were really the catalyst. Lots of long term family farmers though - more than SC County.
  - Yolo has had development pressure similarly.

### There are a number of mental models for agricultural land:

1. The farmer as steward: multi-generational family farm, valued not just as a 401k. Passed down.
  2. The farmer's 401k is the farm. Farm the land and sell it to retire.
  3. Speculative land ownership. Land is land for monetary value.
- What tools do we have to work on these models? Three pronged: development rights and financial, branding, and capacity/investment.
  - We're going to have to come up with a package that includes each part and a different mental model that says farming is a public value that is a permanent part of SC County.

## Closing Reflection from Tech Panel Members

- **Financial viability moving forward:** farmers are on razor thin margins, despite common assumptions that corporate farmers are wealthy. We are walking a tightrope without a safety net, and need a mechanism in place so we can farm and take care of our families.
- **Economic viability** is constantly in mind. How does this plan get to the heart of that? This is about the future.
- **The high cost of land seems to be prohibitive to beginning farmers** looking to get started and pushes them out of SC County. If we want to preserve farming how can we offer smaller lots to those interested in farming?
- We must be mindful of **succession** and who can get on land
- Farming is extremely tough, and many farmers are leaving California – new farmers must be able to replace us. The **regulatory burdens** aren't navigable at times, and there is little incentive to promote farming to students/youth. **You need to find the farmers to replace us.**

- We are trying to make the county more self reliant, local, sustainable. There may be opportunities in partnering with private sector corporations. The Water District’s mission now says Silicon Valley, not Santa Clara valley. How do we bridge North and South County?
- Would like to see collectively, or small groups, a **hybrid of models** presented today. None fit perfectly.
- Would be helpful to sit down with Amie and team about **which pieces of the tool kit would make sense**.
- How do you find **balance between what cities needs and what farmers need**? Unfair burden on farmer to maintain land in ag - shouldn’t all contribute toward having that benefit since it’s something the community wants to see, and draws value from?
- Would have liked to have heard information around the **co-benefit between agriculture and the environment** - from projects and agencies that want to support this work. There’s lots of potential in linking this to an economic benefit.
- **People want ag** - but don’t always have the information they need to support preservation efforts
- Today we talked about conversions resulting in housing development and wanting to stop them, but **housing is needed**. We do need to allow growth to occur and this is a big challenge. Whatever solutions we do come up with we should work to make them regional. Thought should extend southward when thinking about sharing models.

## Next Steps

### Project Timeline

- CAPP team will reach out to Technical Panelists in March/April
- May/June: First draft for review; 2<sup>nd</sup> in-person Tech Panel meeting
- Late Fall: Final draft complete; 3<sup>rd</sup> Tech Panel meeting (virtual meeting to review draft)
- December: Final document published

## Participants

### Project Team

County of Santa Clara	Santa Clara Valley Open Space Authority
Rob Eastwood, County Planning Manager Kirk Girard, County Planning Director Manira Sandhir, Principal Planner Charu Ahluwalia, Assistant Planner Joe Deviney, Agricultural Commissioner	Andrea Mackenzie, General Manager
Cultivate	Ag Innovations
Amie MacPhee	Joseph McIntyre, President & Principal Facilitator Rob King, Program Associate

### Technical Panels

Agricultural Sector	Municipal Sector
John Telfer, Realtor, South County Farmland	Anthony Eulo, Program Administrator City of Morgan Hill
Julie Hutcheson, Santa Clara County Food Systems Alliance	Jared Hart, Long Range Planning of San Jose
Pete Aiello, Usegi Farms Owner/President	Rebecca Tolentino, Interim Planning Manager City of Gilroy
Bill Chiala, Chiala Farms	Brian Mendenhall, Project Manager, Santa Clara Valley Water District
Erin Gill, President, Santa Clara County Farm Bureau	
Janet Burbach, Tilton Ranch, Santa Clara County Farm Bureau	
Aparna Gazula, UCANR Small Farms Advisor	

## Important Links

- Presentation: [Southern Santa Clara County Farming Trends, http://bit.ly/2myDqlr](http://bit.ly/2myDqlr)
- Presentation: [Agricultural Programs & Case Studies, http://bit.ly/2mg2Ao1](http://bit.ly/2mg2Ao1)
- [Healthy Lands & Healthy Economies, Santa Clara Valley Open Space Authority, http://bit.ly/1O2MGCb](http://bit.ly/1O2MGCb)





## Technical Panel 2 Meeting Notes: Municipal Sector

Santa Clara Valley Climate & Agriculture Protection Program  
 Monday, June 19th, 2017 | 9am-12pm  
 Morgan Hill City Hall | Morgan Hill, CA

### Meeting Objectives

1. Introduce proposed framework for creating and sustaining a vibrant agricultural economy in south Santa Clara valley.
2. Receive tech panel feedback on the draft goals and strategies, tools, and agricultural core area.
3. Municipal Tech Panel specific goals:
  - a. Get input on how to make this framework successful in cooperation with local jurisdictions.
  - b. Identify potential policy and political barriers and opportunities.
  - c. Explore potential next steps in engaging municipalities.

### Links

- [Presentation: CAPP Action Plan Outline](#)
- [CAPP Elements Handout](#)
- [Detailed Descriptions of Elements in Handout](#)

### Welcome

- Rob Eastwood welcomed the group and let them know the key objective today was to get the municipal perspective on how the CAPP plan is coming together.
- He noted, there's already a sign of success here: the County, Open Space Authority, and Morgan Hill partnered and added the Chiala Family property for an easement acquisition grant. This is sort of a pilot for what might be a regional effort.
  - It proves we can get in a room together and work towards common goal.

### What we have learned/key findings

(Rob Eastwood and Jake Smith)

Rob and Jake presented slides 6-10 in the [CAPP Action Plan Outline](#). Members of the technical panel asked clarifying and programmatic questions and made comments including:

- Did you discover instances of Silicon Valley corporate kitchens contracting for local produce?
  - There are some instances of this. Will be covered in the elements.
- Density of development and how that relates to ag land.
  - It would be helpful to state approximate **acreage of lands considered for municipal development**, so that we know what's at risk here.
  - This map represents a case where all policies and build out potential are realized.
- Did you think about where the **tipping points** are? If we're losing 8k acres, it's actually more because of associated infrastructure, etc.
  - Not sure how to quantify that? We'll see if we can put some rough numbers to that.
- What is the impact for **greenhouse gas reduction** of losing this acreage?
  - This is something we need to provide more data on in the final plan.
- This does not look at large scale **transportation infrastructure programs/expansion**.
  - We will need to look at this. An Environmental Impact Review for this will be out around the time we launch this.
- Are we expecting **regulation on new growth** here? This could apply to converted land to help mitigate some of negative impacts, such as on groundwater storage/runoff?
  - Our focus has been more on prevention. A bit out of context for this project.
  - **Water resources as co-benefit** is rising as a major benefit for this project.
- Can we **quantify the economic loss** of the loss of ag land? (Effects on economy, jobs, water, etc.)
  - We would have to characterize it as "If we did nothing, what exactly would this mean economically?"

*CAPP Municipal Tech Panel: June 19, 2017 Notes*

- **For investors it looks like these parcels are ideal for purchase**- they can wait and it's just a matter of time before the land use changes and the parcel is more valuable.
- In Morgan Hill is it safe to assume that **converted land would be used for housing**? In other places could land be used for **industrial purposes** that would **add jobs**?
- What are comments from [LAFCO](#) around this project? At some point this needs to happen.
  - They are being briefed in the background. Haven't reached out to them explicitly to get their perspectives on the work.
  - More important for us to get on same page as counties and cities.
- What is the particular role for LAFCO, ideally?
  - If the four jurisdictions come to an agreement I would like to see them say "Good for you, we're behind it". There's some risk they wouldn't say this, though.

## Introducing the Draft Framework for Creating and Sustaining a Vibrant Agricultural Economy in South Santa Clara Valley

(Andrea Mackenzie)

Andrea Mackenzie presented slides 11 to 13 in the [CAPP Action Plan Outline](#). Her presentation highlighted:

- The three parts of the framework: Goals, Tools, and Ag Core.
- At heart of why state is interested: more conversion = more greenhouse gas emission and that makes it difficult for State and counties to achieve climate change goals.
- Some say ag is dead in SCV, but no other place with same climate and soils. This is why we added regional branding and marketing here. South County can't connect w North County. Public awareness of farming industry is needed here.
- High priority for state of CA. This is a prerequisite for a grant from the state- where we want to go with this. CAPP provides foundation for policy agenda.

### Panel feedback

- Could we develop **product labels tiered by how local** they are?
  - In terms of marketing and building brand- many familiar with IPM: Begin with organic, and then increase use of pesticides. Similarly, maybe set up a tiered system of rating products beginning with local?
  - Local to you, local to somebody and expands out from there.
  - *There's always someplace else you can go to get the food you want. At the same time, we have a shrinking footprint of agricultural land globally. Some of places we get food have nowhere near same standards for labor/human condition, pesticide use, water stewardship, etc. This means **not supporting agriculture doesn't lead to long term viability for the quality of living in SCV.***
    - *This is a food security issue.*
- **Highlighting co-benefits** gives the CAPP program an extra push.
  - The program goals might consider highlighting these?
  - Great point- making it more explicit would be helpful.
- Talk to farmers about SCV region and you'll hear that the **climate is unique, the soil is great, and we have a water well managed water district.**

## Establishing the Agricultural Core

(Rob Eastwood and Jake Smith)

Rob and Jake presented slides 14 to 17 in the [CAPP Action Plan Outline](#). In their presentation, they emphasized:

- The Ag Core is intended to designate an area that helps to focus conservation efforts and priorities
- There are options to add "Ag Enterprise Districts/Areas" within the Core to focus on distinctive local ag opportunities with their own custom tools if needed.
- The data behind the Ag Core map is FMNP combined with soil characteristics database. The FMNP State level map didn't consider land that had fallen inactive. It also includes the county's GIS database on pesticide use- this shows what sort of crops, mixture of crops, harvesting schedule, and change over time. We combined these data sets to look at, within an area: how the land was used last 30 years, what soil characteristics, and what crops have been grown. Combined with high resolution development information- this is open source, comprehensive info. From this we began teasing out opportunity areas.
- We can relate this map data to **co-benefits**, such as groundwater aquifers, trails, scenic roads, historic ecology (wetlands), riparian corridors, etc.

CAPP Municipal Tech Panel: June 19, 2017 Notes

- Also similar levels in **development**: type, density, and relating **GHG avoided if areas not converted**.
- This is a starting point- it's broad. **We're trying to identify a resource and where it hasn't been fragmented, and put resources in ag preservation in those areas.**

Panel feedback

What's the **viability of these smaller parcels**?

- If you've got a small 5 acre, CSA kind of farm it's generally less of a problem for neighbors than larger operation- is this true?
  - It depends on the specific scenarios- can't generalize this.
  - **Integrate a study coming out of the food system alliance with this study.**
    - There is an effort by the food system alliance to provide tools to promote ag and their assessment is on same timeline as ours- we could integrate with our study and incorporate lessons?
  - Specialty crops are viable at this smaller scale.
  - If we keep going at the rate we're going 5-10 acre parcels will be left in the dust. Yolo county food distribution network has made **2 acre farms viable with direct sales.**
  - An **aggregation center** would be great for the area.
- The real value of an ag core is focusing people's vision on one area. We don't want to dilute this, and need to focus on areas that we really need to save. We can't do everything. Not to minimize urban agriculture - they'll benefit from program - but we need to **focus on prime farmland.**
  - As one farmer said, it should be highway robbery to develop prime farmland.

## Mechanisms to Protect the Agricultural Core

Rob Eastwood

In this section Rob presented slides 18 to 30 of the [CAPP Action Plan Outline](#). This section covers the tools to support long-term ag viability and GHG reductions in the Ag Core.

- Rob asked: What tools can move the needle on preserving ag? Our list was narrowed down from ~50 tools after discussion with experts.
- Four key elements emerged: Land use ordinances and policy, regional agricultural easement program and voluntary incentives, agriculture economic development strategy, and regional branding and awareness strategy.

The discussion of each element is captured below.

### Panel feedback on element one: land use ordinances and policy

- Farmers are for preserving farmland, but also keep land as "401k". **Will they be angry you're eating into their 401k?** Have we talked about balancing this?
  - If we downzone property it will devalue the property today and that's a heavy lift.
  - If farmers keep doing this it's not a sustainable model.
  - Giving them another option to get investment out of the land. Separate property and development right (and look at co-benefit incentives). But yes, we need to give them another option besides selling land to get some cash. **A good plan will include options for farmers to maintain the value of their land.**
  - **Absentee landowners** in foreign countries comes up a lot, too.
    - It's expensive to farm on **leased land** in the area. Lease rates are very high (10-14k/acre).
- *This historic conundrum is shifting over time: look at the **Farm Bureau** policy on ag land and land preservation: it has had a shift towards the concept that "we're committed to keeping CA in ag". This means many are willing to consider other options to maintain **ag viability**.*
- This may be the tallest order of the program. **Speculative value** is already in lands here. **Difference in use for farming vs development is around 70k/acre.** The market is paying for it as though it's going to be converted. In the case of an easement, it says we need to strip that value off the land. If we were successful in using rules to preserve 8k acres this would be more than half a billion dollars in value. This money in someone's actual or perceived bank account right now. The fourth element is having **public interest** rise up at that point and **express what value that land means for society.**
  - Also, what are we leaving on the table in terms of jobs, and the **economic value** created by the ag industry? It's what they made the case for in Yolo. Have to keep this economic value in the conversation.
  - We have investors that are in no hurry and are in it for the **long term investment.**
- Would like a better understanding of how **farming infrastructure** is factored into this plan. Different types of ag use.
  - Can we **liberalize true uses for ag** (ag worker housing, packing, etc..)? Distinguishing that from non-ag use.

CAPP Municipal Tech Panel: June 19, 2017 Notes

- Did something like this with wineries- liberalizing events and receptions. Has helped out.
- If you had an **ag distribution center** on boundary with urban area- could cause conflict?
  - Joint planning opportunity around buffers- habitat corridors, etc.

Panel feedback on element two: regional agricultural easement program and voluntary incentives

- ACE: Land Trust Partners ask if this is **centralized or decentralized**?
  - Not there yet. Want to look at this and build on strengths of those building on this already.
- FSZ: next level of Williamson Act. 66% below property tax of Williamson Act, for 20 years.
- TAC: Plan has to acknowledge where we want growth/development to happen, and where we want to grow food. **Needs to be consistent regionally.** These are “balance sheet solutions” - can help reduce the cost needed to purchase easement properties. There’s not enough money to go buy asset value on all of the land.
  - In North Coyote Valley how few acres would we have to **allow to develop** that isn’t slated for development that would **fund protection of ag land**?
  - **Describe this in a way that resonates with city planners (units v ag credit).**
- Why should farmers bear the brunt of preserving ag? How about a fee or subsidy that we all have to pay into? A county wide ballot measure?
  - Like what OSA gets for open space.
  - Sonoma county is the best example of this.
  - **Voters** in the county have shown to be progressive- in addition to tapping development, would voters be willing to tax themselves to preserve ag?

Panel feedback on elements three and four: ag economic development and regional branding

- **Corporate investment**
  - Can we get big corporate companies in urban areas to come down to rural areas and invest?
  - Making this **urban:rural connection** is the bigger picture.
- Rob: we have already started on the branding work with a consultant.

General Feedback from the Municipal Tech Panel

- **San Jose:** In brief, this doesn’t seem to have major inconsistencies with **San Jose general plan.** **Coyote Valley** is politically controversial. **Mid Coyote Valley** sees no development over the lifetime of the general plan, and there’s a push to preserve it longer. **Farmland would be good use,** so I think this would align from our standpoint.
  - *What about tools?*
    - We take a strong stance toward **promoting infill development.** We advocate for **urban growth boundary.** If we’re talking about a change in the general plan to support ag and not sprawl, we could support that.
  - *What about **Ag credits**? Could we see even higher density with a **density transfer**?*
    - It depends on where. We have **defined growth areas** outside of urban growth areas and business areas, and we want to keep neighborhoods in tact, so it would need to be within these defined boundaries.
    - Other concern: the SJ general plan is a jobs first plan. TDR’s if adding housing capacity not sure how much- if adding additional housing would it be compromising our job growth in any way?
    - **Would be good to know the volume of TAC’s that would come out of this, and what capacity exists to absorb this transfer.**
  - When **north Coyote Valley** was set aside, the hope was high for a tech campus opportunity. Fast forward 13 years and Google is negotiating with the city around Diridon. Salesforce says they’re not going to do low rise development- this makes the Coyote Valley plan archaic. Do you think it could reopen the north Coyote Valley plan?
    - Not on our plates any time soon. North Coyote Valley is not an area we’re actively seeking to promote- the focus is on downtown and north San Jose as employment centers. Just did 4 year review of the General Plan- told to keep jobs in North CV there. We don’t see political will to address this. **Mid CV is more open..**
    - City of San Jose has imbalance of jobs:housing. Takes affordable housing very seriously. Don’t see TAC program as politically viable if it’s put as preserving south county by promoting housing in SJ. **We’re looking more at incentivizing jobs in SJ.**
    - **Food works report: jobs growth in food.**
      - Sweet spot could be **ag oriented economic development.**

## CAPP Municipal Tech Panel: June 19, 2017 Notes

- **Water district:** this is well rounded. Would be supportive. What does this mean for water: it all means we'll need more water. Here we're not speaking about more ag, but saving what we have; so it **might be better than more development**. Don't see why we'd be opposed.
  - *Could you support?*
    - Yes. **BOD and chair are supportive of ag**, with consideration for water. **In favor of infill**, means not spreading out into areas where you're concerned with flooding, habitat, etc.
  - Water district could have an **open space credit** where you don't charge agriculture use the municipal rate for water. This could be something that lands that show up as the highest likelihood to provide ecosystem service would get lower rate in exchange for?
    - We could raise the issue- an open space credit idea is always in flux. Having a **stronger case for where it's applicable** makes a lot of sense. At this point I'd say the district would be supportive.
    - **Co-benefits** are really where we come into play.
  - As far as supply and cost: water is more affordable to farmers than in cities. One thing to keep in mind: there's still **water district cost in actively managing groundwater**.
  - *Is any portion of southern part of county under SGMA?*
    - Yes, the whole thing. Two more southern basins are being added this month.
    - **SGMA drives co-benefit analysis. It's the coordination of land use and groundwater planning - hard to get to where they want to go without managing these.**
      - We're now evaluating the **capture of stormwater**- working with farmers to create retention basins.
  - There's also an opportunity to improve **rangeland** management: Increased species diversity, amount of water, and quality.
- **Morgan Hill:** Very excited in terms of vitalizing ag economy. **Residents want ag to continue to be here** and we're actively wanting to preserve that. Cost wise, it's not easy. There are a **large number of 10 acre or smaller lots** currently under ag cultivation.
  - **Ag core** concept is great, but to Amie's point- can we agree on what that will be? That will be a much larger discussion. What we've got here is fine.
  - **Climate is a bit downplayed- not as explicit as should be given where this originated.** This would be an important concept to highlight if we're trying to get other jurisdictions to buy in **regionally** to realize benefits of ag in terms of climate and **GHG reduction**.
  - *How about the criteria for Ag Core properties: good soil, water access, outside of core developed area (urban service areas).*
    - **Urban growth areas** might be easier discussion. This urban service area vs urban growth needs negotiation.
    - **There are also large contiguous tracts (over 40 acres) with active operations.**
- **Gilroy:** where do we focus **initial efforts**? Strategically, do we have to capture smaller parcels first, before they start peeling away? In Gilroy, **existing large parcels are outside of urban growth boundary where they aren't of higher risk. Overall gilroy supportive of ag preservation and has program in place. I'd recommend prioritization by risk.**
  - How does our existing [agricultural mitigation program](#) fit? Do the two plans work together?
    - *JOSEPH: It's important that the plan talk about what you've already been doing.*
  - We're also concerned with not limiting our **future job growth**. A hard boundary might lead to fear that it would limit job/economic growth. **This would be key component in getting on board here.**
    - *We're exploring specific tools for specific areas. This is a useful point for this consideration of tools.*

## What do you all see as next steps?

- Gilroy: presentation to council would be a step. They're not aware of the work being done here, so far. Staff need to sit down together so we can share and learn from one another. We'll be the messenger for this information. **Great opportunity currently as we're reviewing our general plan now.**
  - *Present to staff then together go in and talk to the council.*
- SJ: Come back and update through the same group (CSA; community and economic dev). Our general plan was just updated, but it seems like the group is already on the right track.
  - *Could we make this an agenda item for subcommittee?*
    - Yes- this could work, too.
- *The future value is a key: the net present value of a permanent stream of income from property held in ag use vs the net present value from industrial use value which may or may not have a permanent value. The ability to grow food is a necessity and a permanent need.*

*CAPP Municipal Tech Panel: June 19, 2017 Notes*

- Morgan Hill: create a work plan, and **implementation schedule**.
  - **When should we talk about details on the map? Specifically, for the ag program, who does what with what funding source?** These would be productive questions to answer.
  - Project staff and county staff need to sit down and work on this.
- LAFCO issue: counties are trying to shrink wrap cities while cities are saying we need room for urban growth. **How much urban growth do you need, and when?** <We're stuck in the past here: if you look at plan dev area framework of bay area 2025 and metro planning areas in ca for sustainable growth: you have to prove you have capacity to handle more than you did in the past and do detailed infilling analyses, and if it bears fruit will go ahead. What assumptions are we using?>?
  - Something that could move forward: hothouse work already done in <general plan>? and vacant land and what point you'd reach build up capacity and need to grow into resource areas.

**Closing Thoughts and Next Steps (Rob)**

What is coming next—final report incorporating your feedback  
 Last meeting of Tech Panels  
 Community engagement

**Participants**

<b>Municipal meeting at Morgan Hill City Hall</b>	
<b>Name</b>	<b>Department and Description</b>
Anthony Eulo	Program Administrator City of Morgan Hill
Kimberly Vacca	San Jose Planning
Rebecca Tolentino	Interim Planning Manager City of Gilroy
Brian Mendenhall	Project Manager, Santa Clara Valley Water District
Samantha Greene	Assistant Water Resources Specialist, Santa Clara Valley Water District
John Baty	Interim Principal Planner, City of Morgan Hill
Andrea Mackenzie	Open Space Authority
Matt Freeman	Open Space Authority
Jake	Open Space Authority
Joe Deviney	Agricultural Commissioner, Santa Clara County
Rob Eastwood	Santa Clara County Planning
Kirk Girard	Santa Clara County Planning
Manira Sandhir	Santa Clara County Planning
Charu Ahluwalia	Santa Clara County Planning, Associate Planner
Amie Macphee	Cultivate
Joseph McIntyre	Ag Innovations
Rob King	Ag Innovations



## Technical Panel 2 Meeting Notes: Agricultural Sector

Santa Clara Valley Climate & Agriculture Protection Program

Monday, June 19th, 2017 | 1pm-4pm

Santa Clara County Farm Bureau | Morgan Hill, CA

### Meeting Objectives

1. Introduce proposed framework for creating and sustaining a vibrant agricultural economy in south Santa Clara valley.
2. Receive tech panel feedback on the draft goals and strategies, tools, and agricultural core area.
3. Agriculture Tech panel specific goals:
  - a. Receive input on how the framework is likely to be received in the ag community.
  - b. Receive an assessment of how the proposed ag core and tools will impact ag economic viability.
  - c. Explore the needs of specific subregions within the core.

### Links

- [Presentation: CAPP Action Plan Outline](#)
- [CAPP Elements Handout](#)
- [Detailed Descriptions of Elements in Handout](#)

### Welcome

Rob Eastwood welcomed the tech panel back and presented slides 1 to 5 of the [CAPP Action Plan Outline](#) to reorient the group. He noted the main goal for today was to get candid feedback from the technical panel on the CAPP program. Due to technical difficulties with the presentation equipment, members of the technical panel grouped around laptops to view the presentation.

### What we have learned/key findings

Rob Eastwood and Jake Smith presented slides 6 through 10 of the [CAPP Action Plan Outline](#).

#### Panel feedback

- CAPP Team: Is there a sense of a tipping point? What happens if we lose 8k acres?
  - Trends already show shrinking ag land at an alarming rate. If we lost 1/3 of total acreage, those lucky enough to grab some land could still operate, especially if larger areas were left untouched. Especially Coyote Valley. If there's still 16k acres left in a worst-case scenario, those would still be farmed and those of us operating would still find a way to make it viable to continue operating. It would certainly put a dent in things, though. Production would shrink. It would be troublesome.
- With urbanization extending to Watsonville, Gilroy, etc., transportation infrastructure isn't there. We end up with more traffic and higher traffic speeds on local roads. This is difficult with slow moving equipment. This becomes part of our operational program too— how much risk— operational cost/legal cost of operating slow moving vehicles. There's not a lot of signage and commuters are in a hurry and view these vehicles as an impediment. We're talking employee/growers/commuters lives as they make these decisions on the road. It raises stress levels. It's harder on the roadways too- talk to Santa Clara roads and airports.

### Establishing the Agricultural Core

Rob and Jake presented slides 14 to 17 of the [CAPP Action Plan Outline](#). They noted that the core was identified by four criteria: best soils, groundwater supply, outside of developed areas and urban use areas, and are contiguous. CAPP will ask the jurisdiction to use these if you all agree. *Does this core make sense?*

#### Panel feedback on Ag Core

- Water and the ability to have an ag well is important. A more nuanced approach to water access may be needed.
  - In the Coyote Valley, the problem is water—there is a county ordinance on not drilling new wells. If it's not being farmed now, there's a reason why it's not, and regulations are getting tighter. You might have water with regular well, but not enough for an Ag well specifically. If you're on the county pipeline, a drought means they will off your use.
- This is macro, not site-level mapping so some of this nuance isn't there.

*CAPP Agricultural Tech Panel: June 19, 2017 Notes*

- I would add more resources to this core. How would loss of farmland impact labor availability? With decreasing agricultural land, would a labor crew even stop here before going to another region?
  - Good point: a lot of times we've had issues with contract labor coming and looking at the field in the morning and going somewhere else.
- For small farmers with smaller parcels, making the investment to have a successful operation will be a challenge
- I think you're in the right ballpark, but on the other side of coin there are capital expenses for irrigation wells, equipment, etc. This means a small farmer will never get out of starting gate. How do you make sure if someone decides to invest in this that they're successful? Subsidize them, or put it in a manner that they can't fail. This doesn't work well with a budgetary process.
- With smaller parcels, the grower has to move equipment from spot to spot. If people don't let you move it- it's an issue... you end up trying to do it at night.
- Labor/immigration is against you, too.
- Overall, we're In the right area in addressing what's possible, though.
  
- *CAPP Team: Just think about if money, resources weren't an issue; where in the county would you put an ag core? In this plan we would put it within these four criteria.*
  - Level San Jose and return it to farming. From practical standpoint, though, from my operation the last point on this slide is a very good one. There is a certain amount of fixed cost for an operation regardless of parcel size. That's important because we get more of a return on investment if larger parcels are available. Coyote Valley and southeast Gilroy is where I'd focus. We farm 300 acres in CV and we're lucky we have some ag wells that have been there. A lot of valley doesn't have that. Sometimes some farmers can rely on rain, but not for what I grow.
  - Yes, on basics this is right. Comfortable with baseline.
  - 30k foot level, looks good. But when we get more nuanced, there may be some problems (ie: infrastructure).
- *CAPP Team: Is there a cutoff for returns on an operation- how big would it need to be? Is it crop specific?*
  - It depends on what you're doing. Not all operations are the same and don't transpose evenly across a scheme. Until you do it, you don't know if it will work out for some of it. 5 acres, 2.5 acres: some of these growers can make it work.
  - I'm not sure what people want the ag community to look like in south county. You need community to support you. That's going to have to drive what the community wants to do.
- *There is a challenge in niche vs global scale agriculture. Those in between in scale is where it becomes dicey; does that match your experience? Say the 5-50 acre zone?*
  - It depends on market. Direct sale can make smaller parcels work. Spade and plow for example, looking at 40-acre purchase.
  - Success based on the size of a parcel depends because to be efficient and survive, you can't have a 6-foot disc and be efficient. You need larger tools- move up every time. I do 300 acres- I need to be able to get in and out easily. If there's a fence and it's one acre I won't do it.
  - The exception to this is hand labor on small acreage.
- *CAPP Team: How much clearance do you need for equipment?*
  - 40 ft. of headland.
- *CAPP Team: What do you need for a chemical application in terms of a buffer?*
  - Different depending on what you're using. Some are pretty wide.
  - 100-300 ft. for fumigants.
  - We have several fields that are entirely buffered. We get it done- nights/weekend and by communicating with neighbors. This is why contiguous tracts of land are important. With neighbors who are farming it's generally no problem if their place is the buffer. With a neighbor who doesn't care or understand agriculture, it's an issue.
- *Are these 4 principles a good starting place?*
  - Yes - general agreement.
- *CAPP Team: It sounds like the size of the parcel (contiguous) trumps almost everything else.*
  - Cost of land is increasing and affordability per acre is crop specific
  - Rent is in the range of \$500-600 acre/year. Has doubled in the last 5 years or so.
  - I've heard In the thousands?
    - Yes, and for fast crops you might be able to afford that. Peppers are one crop per year, so we can't afford that.

## Mechanisms to Protect the Agricultural Core

Amie MacPhee shared slides 17 to 23 of the [CAPP Action Plan Outline](#).

### Panel feedback

- If we had all ten of these (the bulleted points on slide 17) we'd be happy.



*CAPP Agricultural Tech Panel: June 19, 2017 Notes*

- On the planning side you've got regulations, zoning, market rate value. How does that fit into this program? These are things that aren't popular in private property ownership.
- *Andrea/Amy: One thing that links the tools together: marry smaller footprint for a home on ag parcel with ability to put remaining land into "Super Williamson Act", combined with a neighbor that stacks across parcels. Building a contiguous zone piece by piece.*
- General verbal/visible positive reaction to the idea of an ag ombudsperson, specifically from farmers in the room.

*Michael Meehan, branding contactor was invited to make some general comments on his ag branding work to date in the County. He shared:*

- *We're coming up with pathway for a branding campaign to work: creating narrative, identity.*
- *Also on the investment side: we see a positive feedback loop between training programs and an agricultural identity and seek to create cohesion there. For example, you drive into town and see signage highlighting agriculture in the region.*
- *We're also working through more direct B2B marketing- facilitating institutional purchasing. Universities and tech are desperate to get local food into their cafeterias.*

## Feedback from the Municipal Tech Panel

*We're working towards keeping land in ag, preventing conversions, building on legacy, and crafting a unified framework. The core concept here is that there's a core space of ag land that deserves our special attention: the ag core. The four elements discussed will be used to make good on these goals. Does it make sense? Can it win support of you and people you know in ag?*

- Doesn't make total sense; fatal flaws. Try to tie first one (land use ordinances) with second (voluntary easements). You're proposing to beat farmers up with regulations and then pay them for that. Not smart strategically—we need to think about how they work together. If it's not done correctly, lots of people won't participate. This is exactly what's been wrong in this county. You can't come heavy handed on element number one (Land Ordinances and Policy), and then come in and be successful with number two (Regional Ag Conservation Easement Program & Voluntary Financial Incentives).
- Lots of good tools, but can't come in too heavy handed with regulation.
- General plan is land use regulation.
- If you need to lower the value of property, that's a no go. Just wrong to come out of the shoot saying that's how we're going to solve this.
- Financial incentives (number 2) need to go way up and reinforce that.
  - Beyond educating North County about ag, they also need to chip in financially. They want to hold it for their benefit.
- North County could chip in enough dollars to make it whole, in addition to other grants.
- What about streamlining worker housing? This would be helpful.
- Ethically I have a problem with lowering the value of land.
  - We need to be careful how/what we say coming out with these tools - "Lower value".
- I would feel more optimistic with the branding campaign.
- Big thing: there has to be market based approach to bring people into this voluntarily rather than being coerced through "beans".
- I read it differently when I read lowering land value. My thought was more around let's take away speculative value that was driving things. I understand how that would send certain segments off not wanting to touch this. Making sure we're emphasizing carrots vs sticks will help.
- When are we going to do broader outreach and start those conversations in the public? I hear people ask, "Where's this program going, I haven't heard anything and I want to know more". Would be helpful with more public outreach ahead of time to vet conversations to identify triggers and have time for public buy in. I wouldn't want to see county put forward a plan with huge kick back from not hearing enough. Public meetings should be held a little sooner (we know how HCP process went).
- Class 1 and 2 soils only? Class 3 can be viable. Are we pushing class 3 soils out here and sticking to 1 and 2?
  - CAPP Team: This was just a summary of a case study. It's open to discussion. Class 3 is a large portion in county so would be no brainer to include it.
- Right side, awesome (Ag Economic Development Strategy & Regional Branding and Awareness), left side hot potato (or grenade) (Land use ordinances, policies, and agricultural easements with voluntary incentives). Fact of the matter is ag land isn't worth very much, it's cheap. We farm because we love it. Two on left will be touchy because we're in a type of job that requires walking on tightrope without safety net. Last year was worst year ever for us, first loss in almost 40 years. It put us on the canvas from just one bad year. All we've done to build over 39 years and one bad year and now we're struggling and may be for a while. There's no security in this business. Already heavily over regulated. The column on the far left speaks to that more. If you're seriously talking about incentivizing landowners/farmer who own the land about committing to putting things in easements, it's got to be a much (exponentially) bigger number than what ag lands are worth.
- CAPP Team: **Gap numbers- 70k-140k as a worthwhile top end.** In conversations on our end no one is talking about 20k.

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- That's good- would make more intriguing. Even at that, if not right now, a few short years from now if that land were **eligible for development** it would still have trouble competing at that price.
- CAPP Team: You mention eligible for development (which is a General Plan function). What if we don't extend those rights to make it eligible for development. How do you create a program that keeps ag viable? We're trying to find out where the line is. Otherwise your allies don't know how to help. What matters: value in land vs keeping it in ag?
  - I have 2600 acres on the north side. We will stay there unless we're regulated out by the state and federal regulations. In the 60's we green belted, we have an easement for PG&E, pipeline. We're the largest landowner without a land conservation easement on it. For range land it's awesome- would love to see it preserved. We have the value of our land down as far as we can get it - from my side looking in I can't ever have a high value on my land. Otherwise, I would sell at high rate to get out of here. On the other hand, I'm valued down to protect myself. I'm not here for the money- I'm here because I enjoy what I'm doing. Cattle and hay don't make money. When landowning parents die, their kids don't want to pay an inheritance tax- it's tough. The next generation doesn't want to farm. What happens to the ranch? It all depends on regulations to move forward. It's a constant battle. This is for rangeland and hay. Row crops might be different. We all have the problem of small parcels and traffic. We are a thorn in their side.
  - To summarize: it's our 401k. In a lot of cases it's all we have as our safety net if things go horribly wrong. Unfortunately, the state of things is that we're on a runaway train towards that station with no brakes. If we try to farm and can't the only way we can put food on our family's table is to sell land. I tried to team with a developer to purchase land we were leasing- it was scheduled for development so the value was way up. Eventually when it is developed i'll have enough security for my kids, and maybe theirs. That's okay because I intend to farm that land as long as I can. But in order to continue farming we need a little piece of mind in the long term. If someone came to me and offered 140k for 100 acres I might retire today, though.
  - Great comments here. Valid points with the previous statement. I'm a tenant farmer. I lease year to year. Not a long time. No room to put improvements in case I have to vacate. Most who own the property I'm on are looking for the future gain. One piece of land I was on was owned by a trust, and 11 of the 13 members of the trust wanted to sell. It took 4 years to sell and they got 60k/acre to sell. That was divided into 10 acre parcels. These transactions happen when a lot of properties are owned by investors. It's difficult to bring people in on less than 10 acres because it requires high capital and yields low ROI. It's urban edge farming and this is where we need to figure out where/how this works. Growing and growing is not working for everyone.
  - This issue keep coming up for me: the county has been accused through the SE quadrant process that they're to blame for the situation by allowing rural residential ranchettes to happen. I understand not infringing on rights to do this- but what does the county do to remove a problem they're admitting they have if you can't incentivize enough? We're still back to square one then, if you don't package it up so we can minimize impact of those.
    - It's a matter of degrees- I don't think we should do away with all regulations.
    - Don't blame county for this- the problem was created long before anyone here was alive.
  - *CAPP Team: We're trying to encourage ag- not take something away. We're saying, if you stay in ag there's a goody bag here for you to take advantage of. Let's look at transferring units so you can cash out. We may have missed the mark on language/conveyance here.*
  - We all want to save agriculture in the county. We need to make it so that developing land doesn't have a high value- that the farming of land has the high value. In this county farming is the high value. We need to convince the county that ag land holds the highest value.
    - We need it to be more important than developed properties, ag is the most important thing in SC Valley.
- Do you all understand who owns what land?
  - Tough- local LLC might own and it's a foreign company. There are holding companies and attorneys. Lots of land appears to be owned by folks that aren't local landowners.
- I like what Rob said about how GHG funds can come back for ag easements and conservation. We see save the air days all the time- how can that transfer into trying to preserve agricultural land? Look at the changing use of vehicles- a Prius is taxed differently. How can something like that happen more locally in terms of preserving ag land?
- *CAPP Team: Would the agricultural economic development, and the regional branding, education, and awareness strategies help growers?*
  - Yes, for the most part. Regulations are not just local, but also federal. Food safety for example. It's stringent for wholesale. The Farm Bureau does some farmer advocacy- need more for different farm demographics we will have. Food safety will be the biggest one. For Chinese growers it will be difficult to comply. There's not the same network for food safety as for pesticides.
- Is there an economic analysis of wildlife corridors? This could be a way to trigger open space acceptance with ag as a part of it?
  - CAPP Team: This is a developing concept. We want people to know these lands and their services aren't free. There would be a cost to replacing them if we lost them. Work to raise the value and visibility to the public -- in some places we're almost at point of no return. Coyote Valley report recently came out- if we put a price tag on these

*CAPP Agricultural Tech Panel: June 19, 2017 Notes*

things local decision makers will think about ag viability, wildlife, water. Right now nobody in the county is thinking that way.

### What does the Tech Panel want to see next?

*What are the things you would like to see back from the project proponents as they try to bring this into place? We are hearing: More details, less emphasis on regulatory hammers, more voluntary, look at how to partner on regulations, and that there's more nuance in different land use patterns and preferences even amongst three farmers in room.*

- How would the population react to a tax amongst all property owners in county? We need to figure out what the dollar value of open space is and go to the public and see if they believe that too. A county-wide ballot would include both property owners and non-owners- it's easy for non-owners to say "Sure, go ahead". I think we're in consensus to say yeah, we see value, and what we do has value for quality of life. But does this resonate with someone who works at XYZ tech company?
- On another scale, all of the development (especially in Morgan Mill), is up to 3 stories and soon/now 4. Where is the view tax? Everyone gets the benefit of view besides the farmer/rancher. I'm regulated to do what I need to do. I don't have parcels. There's already things on my property that mean I couldn't take advantage of TAC's. It all comes down to Ag land has to be of higher value than potential development lands.
- I would rather see the next version of this sooner rather than later. I don't disagree about bringing the North County into the larger picture. Ag land has to be viewed as highest and best use. I don't want to put the complete onus on one group, so we need to make sure ag fees make a statement. What's the message you're sending via mitigation fees about that ag land?
- Left side (land use ordinances and policies and regional ag conservation easements and voluntary financial incentives) is where battles will be fought. We're going to have to respect two very opposing mindsets here.
- Landowner/tenant relationship: almost all landowners are descendants of farmers. Some family members survive and want to see it farmed, but if they can sell it they will.
  - Kids sitting back waiting for mom/dad to bite it and then swoop in.
- Right side of page (ag economic development, regional branding, education, and awareness strategy): less hot button; all appear to be on board here. As an industry we can use help with getting our story out there. These are two important categories not to be taken lightly, and we're willing to participate. Will have fewer roadblocks on this piece- focus here.
- Not sure where we're at in terms of a full rotation of this project- but the big thing is how do you bridge this historic movement of properties from an ag base into new use? Until you can come up with a financial mechanism to change course, it will be difficult to get people to buy into these programs. I want to see it succeed, but I'm not seeing how this mechanism is developing yet. It might sound fine in this room, but what about when land owners weigh in, whether absentee or otherwise?

### Closing Thoughts

Rob closed the meeting by letting the Panel know that next steps include

- final report incorporating your feedback
- A last meeting of Tech Panels to look at the final report
- Community engagement
  - *We will be working to find property owners, and work in community. We'll talk to cities. Then we'll come back with a more detailed plan, and action plan, of how it rolls out in the fall. Our goal is to be before our board and OSA before October.*

## Participants

<b>Agricultural meeting at Farm Bureau</b>	
<b>Name</b>	<b>Department and Description</b>
John Telfer (Morgan Hill)	Realtor, South County farmland (Southeast Quadrant)
Julie Hutcheson (FSA)	Santa Clara County Food Systems Alliance
Pete Aiello	Usegi Farms Owner/President
Erin Gill	Grass Farm Business Owner; President, Santa Clara County Farm Bureau
Janet Burback	Owner/operator - Tilton Ranch ; VP Santa Clara County Farm Bureau
Aparna Gazula	UCNAR - Small Farms Advisor
Michael Meehan	Acre Policy
Andrea Mackenzie	Open Space Authority
Matt Freeman	Open Space Authority
Jake	Open Space Authority
Joe Deviney	Agricultural Commissioner, Santa Clara County
Rob Eastwood	Santa Clara County Planning
Kirk Girard	Santa Clara County Planning
Manira Sandhir	Santa Clara County Planning
Charu Ahluwalia	Santa Clara County Planning, Associate Planner
Amie Macphee	Cultivate
Joseph McIntyre	Ag Innovations
Rob King	Ag Innovations



## Technical Panel 3 Meeting Notes

Santa Clara Valley Ag Action Plan Program  
 Monday, October 30, 2017 | 1pm-4pm  
 County of Santa Clara Offices | San Martin, CA

### Meeting Objectives

1. Present and get input on final draft of the Ag Action Plan
  - a. Inform the Panels about updates since June Meeting
2. Discussion and Feedback on Implementation
  - a. Priority on Programs / Policies / Tools
3. Discuss Roles of Partner Agencies – Collaboration going forward
4. Next steps

### Links

- [Meeting Agenda](#)
- [Ag Action Plan Update Presentation](#)

### Welcome and Introduction to the Action Plan

Rob Eastwood welcomed the joint municipal and agricultural tech panel back to the project. He presented slides 1 to 10 of the [Update Presentation](#) to reorient the group. He noted in particular the change in the program name for the Santa Clara Valley Agricultural Action Plan to reflect the plan's emphasis on ag economic viability. After brief introductions from technical panel members, the staff team continued its presentation on the draft plan.

The Action Plan is built around three core goals:

- Keeping lands in ranching and farming
- Protecting critical lands from conversion to development
- Creating a unified regional agriculture policy

Taken together these goals aim to create the ideal environment for agriculture, which includes:

- Large lots
- Inexpensive lots (leases / fee title)
- Good soil
- Water available and inexpensive
- Seasonal and year around labor (housing)
- No urban interface
- Easy access to markets and customers
- Less "red tape"
- Support System: packing, warehousing, distribution, equipment, farm supply

## Agricultural Resource Area

In this section, the Technical Panel was walked through slides 11 through 13 of the [Update Presentation](#) on the creation of an agricultural resource area.

To implement these its goals for agriculture, the plan calls for creating an Agricultural Resource Area. This area is:

- A **priority area** that focuses all policies and programs
- Consists of primarily prime farmland soils
- Has access to reliable groundwater
- Outside city limits
- Consists of large contiguous tracts of farming
- Includes adjacent ranchlands

The priority area consists of six sub-areas on the Valley floor including:

- Coyote Valley
- Tennant/San Martin
- Buena Vista
- The Wine Region
- Leavesley
- Pacheco Pass
- Adjacent ranchlands

Within the Resource Area the four elements of the Action Plan—Branding, Education & Awareness Campaign, Rethinking Land Use Policy, Ag Land Conservation Easements & Other Voluntary Incentives, and the Ag Economic Development Strategy—would be focused.

### Panel feedback

The panel was asked for feedback on the concept and the boundaries of the Resource Area. Comments and questions included:

Panel: Is there any sector of south county ag that has grown/ is thriving?

- *Walnuts and cherries (in terms of acreage)*
- *Wineries stabilized (58 with winetasting)*
  - *Production and value per acre up for these*
- Comment: history is best indicator of what works. Good to focus on what is the growing sector.
- Little farms do not survive without big farms. Need bigger operations to make small local-focused farms work.

Staff: Do the sub-regions make sense?

- This map began simply with land use delineations.
- BV/ Leavesley is the best ag areas
- Bloomfield south has bad soil and water
- Most productive ground is in south part of Leavesley, but map is fine
- Buena Vista: 40-100 acre range parcels
- Leavesley 100-200 acres plus, larger scale
- Coyote Valley: best to divide this into north, central, and south

Panel: What were criteria for separating the sub-regions?

- Looking at size of properties, operations, crops grown, general location in regard to non ag uses, class of soils. Geography, dominant resources,
  - But these are conceptual boundaries
- Morgan Hill regards 2 parts of San Martin differently. The northern section is surrounded by development and it is inevitable that your property will be developed.
- Southern: more question about what will happen development. Consider renaming to San Martin/Tennant A and B
- Over period of general plan most likely for growth to happen in A area.
- Example of what happens without proper policy: San Martin

## The Four Elements of the Ag Action Plan

In this section, the technical panel was reintroduced to the four proposed elements of the Action Plan itself and asked to provide feedback on the plan and priority actions. This material was presented in slides 14 to 26 of the [Update Presentation](#).

### Rethinking Land Use

This section includes actions to change zoning/general plan and to promote agricultural worker Housing.

#### Panel questions

Panel: Is there any process to define something as ag exempt?

- Answer: We do have ag exempt on the books but challenge is it is an exemption to a building permit. Concept of ag exempt is that no one is in there. Historically people were putting people in which isn't allowed under ag exempt. If someone is living in the building it can't be ag exempt.

#### Panel Comments

- The pain of getting infrastructure approved is considerable if not within given template
- Bring back ag exempt but make it flexible and multi-use. For wineries/ ag tourism they could benefit
- Facilitate ease of processing/ production by releasing stranglehold on requirements for ag use-related land
- Historically, process with wineries took longer than expected.
  - Intent with ag deregulation on use permit is to lubricate that process. Codes still won't change.
- Farmers don't have much time to innovate— want paths carved. Having use permit process different for everyone is cumbersome. Create blueprint.
  - This can be standardized into different buckets:
    - Processing
    - Packaging
    - Retail
    - Take out of county review process
- San Benito an example of this, but smaller
  - Wineries permit that fits in certain parameters is an example of this. If you have employees can't get away from building permit requirements.
  - We (county) prepared to work with you on this.
- Comment: actions here don't address land speculation issue.

- If someone pays \$145,000 per acre for 10 acre parcel it is likely for land speculation. Different problems.
- What is driving speculation? All things
- Right to Farm:
  - Most people don't read documents when they buy a house.
  - Other problem with right to farm they can find something to harass you about.
    - Air quality
    - Parking for laborers
    - Field encroachments
- "It's really hard to regulate out people being jerks"
- Way for different orgs to mark ag zones and educate public about ag? Is there a way to raise the bar that prevents people from only saying I don't know.
  - Example: Signs at entrances to different areas letting people know they are driving through ag land
  - This question belongs in branding and education category.
- Coaching of planning departments to interface with irate urbanites would help.
- Idea: 10-minute video about right to farm.
- Affordable Housing for Ag workers:
  - How do you get down to \$50K?
    - Modular unit is \$80K
  - Who has been successful with this in nearby counties?
    - Salinas/ Monterey there are examples
  - Is there a NIMBY element to this?
    - Not so much in rural areas.

### Ag land conservation/voluntary incentives

In this section, the panel provided feedback on the plan for creating a farmland security zone, agricultural conservation easement purchase program, and stewardship payments for environmental services.

- How does the Farmland Security Zone work?
  - Landowners would apply/ enroll
  - Similar to Williamson Act
- Are there restrictions to keep it being farmed?
  - Yes, it has to be actively farmed and achieve a minimum farmgate sales level
- An easement could automatically qualify for FSZ. Is there some way to combine the two?
  - Where and at what size would this be financially viable to farmers?
  - Direct hit to general fund
  - Would need a lot of support in ag community
    - If we get sense there is support in ag community we will tee this up
- Templates for ACE being developed by land trust alliance

Need for funding mechanism for these programs:

- Morgan Hill one of only cities that has development fee.
- For ACE, State has own priorities and may be hard to track and may not be reliable. Need something local that won't compete with Central Valley.
- Half cent tax added to county transfer tax on sold properties as one approach
  - Special tax  $\frac{2}{3}$  vote
  - Throughout county including north county
- Grants always tricky this is worth exploring.



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- Half cent tax added to county transfer tax on sold properties as one approach
  - Special tax  $\frac{3}{4}$  vote
  - Throughout county including north county
- Grants always tricky this is worth exploring.

- Disappointed that we aren't discussing non-financial alternatives.
- Will existing landowners be able to realize the worth of their land at market rate?
- FSZ: 20 years is a long time when looking at water unknowns and impact on farming.
  - 10 acres for prime, 40 for non-prime you must prove financial gain through Schedule F can claim those contingencies as a loss.

*Farming provides ecosystem services and benefits to the region that are not financially recognized.*

- NRCS has hundreds of practices they will fund- vastly underutilized in SC county. Combine with water use?
- Farmers could use help getting through red tape with water compensation.
- Need to get better at partnering with others
- Looking at overall values of parcels
- WCCD encompasses flood control and fallowing crops during drought.
- Not a primary project because not a lot of benefits but did get approved for South county ag recharge to use ag lands to help recharge groundwater.
- Is it possible to incentivize cluster development and bunching acres for long-term ag lease with tax benefit?
  - Add those criteria and allowances. Could be built that way.
- Now you can do power purchasing agreements. Who are other players that could help me talk to those owners?
- Recommendation: Sustainable Conservation for groundwater recharge
  - Planning for recharge for ag not calculated—only residential etc.
  - Flag conversation about water planning

### Agricultural Economic Development

In this section, the panel provided feedback on the proposals to promote agricultural economic development including creation of a farm ombudsperson, and agricultural enterprise grant program, a farm incubator/ag park, and a local food preference procurement policy.

#### Comments

Question to the panel: It can be very difficult for farmers to navigate regulatory process and obtain permits. Concerns or thoughts about ombudsman position?

- Online portal/ platform as supplemental support could be useful

Question to the panel: How do we give new farmers access to land, technical support, access to markets, and reduced overhead costs. Concerns or thoughts about a farm incubator?

- Would Public lands put to use for this purpose?
  - Yes, one potential is 245 acres at the intersection of Fraser Lake and Bloomfield Rd.
- The County would be willing to give grants to operate beginning farmer/ rancher program

Question to the Panel: It can be difficult to conduct sales to local institutions. Concerns or thoughts about a local food preference program?

- It could be helpful to do a survey of institutions to find out where they are getting their food from
- Concern: based on our experience about what institutions are willing to pay, farmers would not be able to support themselves

## Branding and Marketing

In this section, the panel provided feedback on the proposals to increase the awareness and perceived value of County agriculture through an educational campaign, institutional outreach, and a communications program.

Question to the Panel: we see a lack of public awareness understanding and appreciation of working lands and ag. Concerns or thoughts about a \$250,000 “two valley’s ad campaign that would ultimately be taken over by the ag community?

- Concern: Cities have the responsibility to meet their financial responsibilities. There is potentially a disconnect between cities branding effort and this idea. We need to coordinate.
- The goal of the campaign should be to help SC ag survive:
  - Keep commercial growers in place
  - Brand it in a meaningful way
  - Build a pipeline of new farmers
  - Help find new business models for farming?

## Roles of Partners/Next Steps

Rob concluded the meeting by indicating the Planning Department would be working closely with the cities, the Open Space Authority, the Water Agency, and other organizations to complete the plan. The goal is to have something to the supervisors by the end of the year, with implementation beginning next year.

The meeting concluded with hearty thanks to the advisors for their vital contributions to the shape of the Action Plan and their support in the plans implementation.

# APPENDIX E:

## COUNTY & OSA STAFF PROVIDED REGULAR UPDATES TO THEIR BOARDS AND COMMITTEES, & ALSO PROVIDED PRESENTATIONS AND UPDATES AT CITY COUNCIL MEETINGS, LAFCO BOARD MEETINGS, & FARM BUREAU MEETINGS

### A FULL LIST OF THESE BELOW:

Meeting Date	Presentation to
August 30, 2016	Advisors and Technical Panel Members (Open House)
September 20, 2016	City of San Jose Community and Economic Development Committee
September 21, 2016	City Council, Morgan Hill
September 6, 2016	Santa Clara County Farm Bureau (Farm Bureau)
October 4, 2016	Farm Bureau
October 6, 2016	LAFCO
October 20, 2016	Housing Land Use Environment and Transportation Committee (HLUET), Santa Clara County – Quarterly Report
October 26, 2016	Food System Alliance
November 1, 2016	Farm Bureau
December 5, 2016	Grower’s Meeting
December 7, 2016	LAFCO
January 3, 2017	Farm Bureau
February 16, 2017	HLUET – Quarterly Report
March 7, 2017	Farm Bureau
March 24, 2017	Planning Commission
March, 2017	Individual meetings with Staff from LAFCO, Santa Clara Valley Water District, San Jose, Gilroy and Morgan Hill
March, May, August 2017	Outreach with landowners interested in placing an Agricultural Conservation Easement on their property
April 27, 2017	HLUET – Quarterly Report
July, 2017	Farm Bureau
August 17, 2017	HLUET
August 24, 2017	Santa Clara Valley Open Space Authority Board of Directors
August, 2017	Farm Bureau
September 5, 2017	Farm Bureau
26 September, 2017	Santa Clara County Board of Supervisors – Status Report
September 27, 2017	San Martin Planning Advisory Committee
September 28, 2017	County Planning Commission
October 3, 2017	Farm Bureau
October 4, 2017	LAFCO
November 16, 2017	HLUET – Quarterly Report
November 28, 2017	Santa Clara Valley Water District – Board of Directors

## APPENDIX F:

REPORT - THE ECONOMIC CONTRIBUTION OF AGRICULTURE TO THE COUNTY OF SANTA CLARA, AGRICULTURAL COMMISSIONER'S OFFICE (2014)



# The Economic Contribution of Agriculture to the County of Santa Clara 2014

Agricultural Commissioner's Office

<http://sccagriculture.org>



# Santa Clara County Agriculture

- The agricultural industries included in this analysis produce a total of \$1.6 billion in output value and contribute a total of \$830 million annually to the Santa Clara County economy.
- These industries employ more than 8,100 workers annually.
- The resource base of agricultural land declined significantly in the 1980's and 1990's, but has recently stabilized. The value per acre and the value per worker created by Santa Clara County agriculture has continued to increase and has never been higher.
- Agriculture provides diverse stable employment opportunities for both skilled and unskilled laborers.
- Like the other high-tech industries in Santa Clara County, agriculture is growing in productivity per unit worker and per unit land.
- The Santa Clara County Open Space Authority estimated that the total value of Santa Clara County natural capital exceeds \$45 billion. Agriculture preserves some of these vital natural processes and adds to the character of the county.
- Agriculture can be viewed as self-financing open space, providing important ecosystem service values to county residents.

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## Project Overview

It is a fundamental but not well-known fact that agriculture provides additional value beyond \$276 million in gross production value to the Santa Clara County economy. Growers purchase materials and machinery from local suppliers and employees of these industries purchase goods and services from other businesses in the county. Agriculture generates additional economic activity beyond the value of crop production. While the direct value of agriculture is commonly cited, the total economic activity generated in related industries is rarely quantified or mentioned in public policy decisions.

The Santa Clara County Agricultural Commissioner initiated this study to quantify the economic worth created by key agricultural industries in Santa Clara County and to trace that value from the field to final processing and consumption. Many farming activities are vital to preserving open space, providing habitat for native species, or improving other ecosystem processes. These benefits are often referred to as “ecosystem services” and their economic importance is presented in this report. To put all of these values in context, the report begins with a narrative and summary of recent trends in Santa Clara County agriculture.



### Analysis

The study was conducted by ERA Economics, an agricultural and resource economics consultancy based in Davis, California, and included three phases:

1. **Survey** county agricultural businesses to collect economic data including expenditures, revenues, and employment statistics for 2014.
2. **Quantify** the value of primary crop production using the survey data and an economic model of Santa Clara County crop production for 2014.
3. **Estimate** the total economic value of each major agricultural sector in the county for 2014.

The project team integrated this data into the IMPLAN model (MIG, Inc.; Version 3.0 2013 R3 database, [www.implan.com](http://www.implan.com)) and created a custom IMPLAN model reflecting the expenditure patterns and agricultural industries in Santa Clara County in 2014. This three-stage analysis approach is unique from other economic contribution and value analysis because it captures the economic linkages from the farm to all related industries.

### Measures of Economic Value

This analysis includes 8 agricultural sectors: crop production, mushroom farms, nurseries, livestock, wine and agritourism, support industries, primary processing, and food manufacturing.

The economic contributions of each sector are defined as follows:

**Production value:** The gross sales value of an industry. In crop production, for example, this measure is equal to the price of the crop multiplied by the total production and analogous to the measure of production value reported in the Annual Crop Reports. <http://sccagriculture.org>

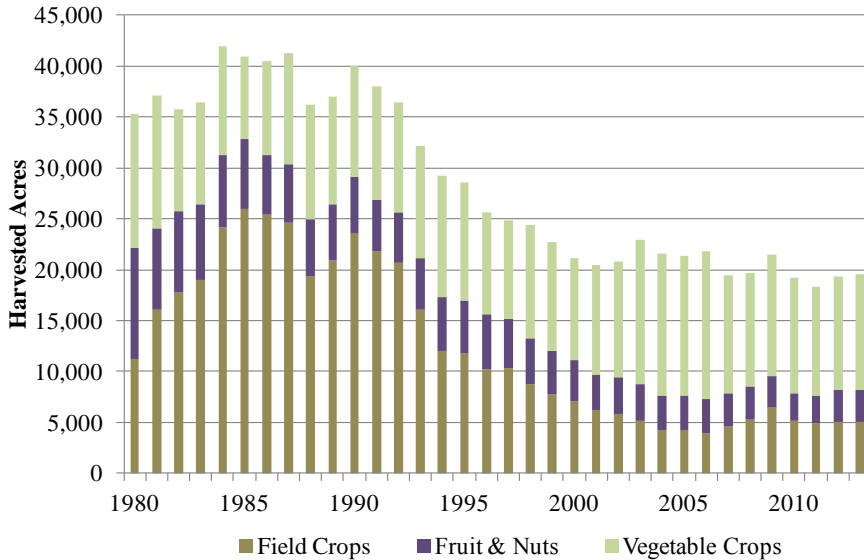
**Value added:** The net contribution of an industry to the Santa Clara County economy. It is equivalent to the commonly-cited national measure of economic activity known as Gross Domestic Product (or GDP).

**Employment:** The number of on-farm and off-farm jobs in a sector. This measure includes field laborers, farm management, and professional staff in related industries.

# Trends in Agricultural Land Use

Like other industries in Santa Clara County, agriculture has been subject to constant change and development. There are two dominant forces driving this change. On one hand, there has been a significant reduction in the agricultural resource base of irrigated land due to urban development. Countering this effect are shifts in the crop mix toward higher-value commodities and increases in productivity that have created substantial growth in the value of agriculture per acre and per worker. The footprint of agricultural land is smaller, but the continued growth of both land and labor productivity has resulted in a county agricultural sector that is gaining in both production value and employment.

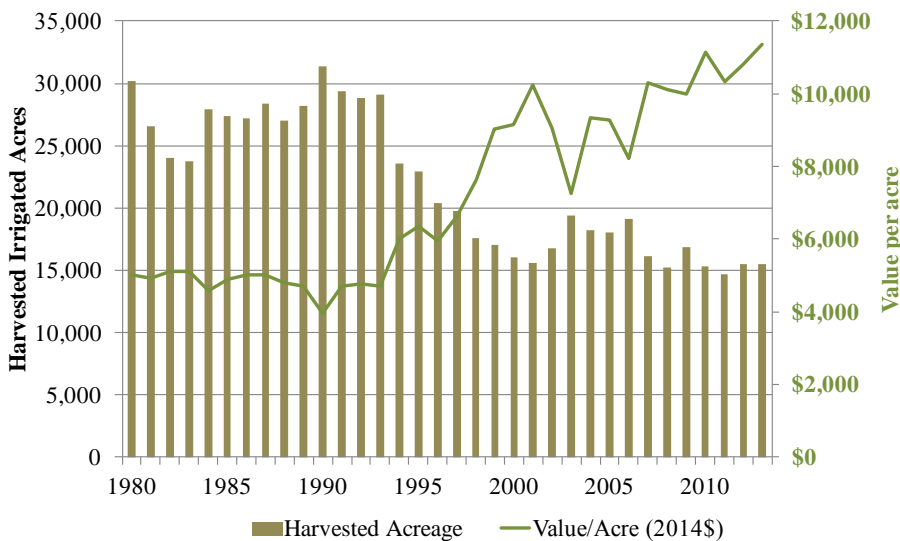
**Figure 1. 1980 - 2013 Harvested Acreage by Crop Group**



Over the last 30 years the land resource base has declined from a peak of 40,000 acres in the late 1980s to the current level of 20,000 acres. This excludes rangeland and currently includes approximately 4,000 acres per year of dry farmed grain hay.

The crop mix has shifted toward higher value, labor intensive, fruit and vegetable crops.

**Figure 2. 1980 - 2013 Harvested Irrigated Acreage and Production Value per Acre**

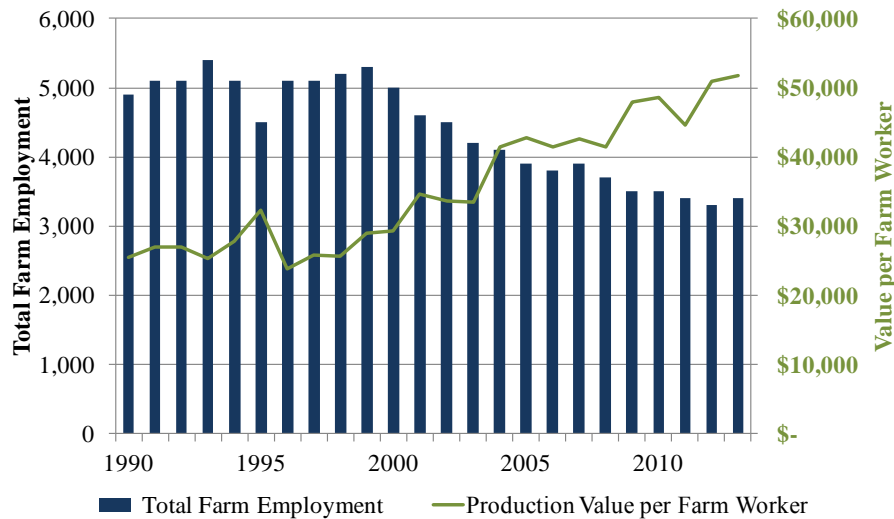


The increasing value per irrigated acre is driven by a shift toward higher value crops, increases in productivity, new technologies, and more efficient farming practices.

The value per irrigated acre has never been higher. The proximity to Silicon Valley tech firms provides opportunities for new innovation in precision agriculture technologies.

# Labor Productivity and Current Trends

Figure 3. 1990 - 2013 Direct On-Farm Employment and Production Value per Worker



Labor productivity has mirrored the increases in productivity of irrigated land. Direct farm productivity per employee grew from \$27,000 in 1990 to the current level of \$55,000 per employee, essentially doubling in inflation-adjusted value.

The intensity of labor per acre has also increased. Between 1990 and 2000 irrigated land area in the county decreased by 50%, while farm employment only decreased by 26%.

**Agriculture provides jobs for a sector of the economy not served by other industries in the county.** Agriculture provides stable jobs for skilled and unskilled laborers. Many of these jobs are well-paying and provide year-round employment.

**Santa Clara County agriculture is small but growing in value.** Santa Clara County agricultural production ranks sixth in the state in land productivity at \$11,000 per acre. Despite its small size the county ranks 30<sup>th</sup> in the state in total agricultural production.

**There are some policy challenges ahead, but the agricultural sector is well-suited to adapt.** Irrigated agricultural production will be affected by several policies that are currently being implemented. The most significant policy change is the Sustainable Groundwater Management Act passed in 2014. While this will substantially change many of the Central Valley irrigated regions, Santa Clara County groundwater is already well managed and this will benefit producers in the county, assuming a continuation of the open space water pricing policy established by the Santa Clara Valley Water District.

**Looking forward: Production.** In the past, agricultural productivity was driven by expansion in several sectors, most notably, specialty vegetable crops, seed production and wholesaling, agritourism, and wine production. On-farm innovations and new technology will continue to drive future productivity growth in these sectors.

**Looking forward: Demand.** Consumer demand for healthy fruits, nuts, and vegetables is steadily increasing, driven by rising incomes at home and in international export markets. This trend supports strong prices for many of the crops produced in Santa Clara County.

**Preserving open space.** The Santa Clara County agricultural sector can be viewed as self-financing open space that generates jobs, value, and ancillary industries in the county. Sensible land preservation policies and water pricing in Santa Clara County will help ensure continued growth in the sector.

# The Value of Agriculture

The value of an industry can be broken down into individual components. These components include the direct, indirect, and induced economic value. The indirect and induced effects can be thought of as the “ripple” effect in other related industries.

**Direct:** The economic effects of activity by an individual agricultural sector. For example, crop production.

**Indirect:** The economic effects of intermediate input purchases by the sector. For example, irrigation supply purchases for crop production.

**Induced:** The economic effects of spending by employees in all other industries. For example, farm workers purchase housing and food in the county.

$$\text{Direct} + \text{Indirect} + \text{Induced} = \text{Total Value}$$

This analysis considers a wide range of agricultural activities in Santa Clara County. Agriculture usually means primary crop production in the field. In Santa Clara County this might be garlic or fresh peppers. Some of these crops are processed in the county and some are shipped outside of the county for processing. Primary processing that occurs in the county is included in the analysis.

Santa Clara County is home to many award-winning wineries. Wine production is a high value industry which depends on the county vineyards, and is included in the analysis. In addition, wineries increase county agritourism. Agritourism also includes events such as the Gilroy Garlic Festival, Mushroom Mardi Gras, and local Farmers’ Markets. All of this economic activity is included in the analysis.

A little farther down the agricultural supply chain is the food manufacturing industry. In Santa Clara County, this includes cheese manufacturing and production of frozen meals. Arguably, this industry is one step removed from crop production on the field. However, the food manufacturing sector is included in the analysis as it does depend in part on the primary production and processing which originates in the county.

In total, Santa Clara County agriculture contributes \$832 million in value added to the Santa Clara County economy and employs 8,110 people annually.

	Direct	Indirect	Induced	Total
Production*	\$1,166	\$222	\$211	\$1,600
Value Added*	\$545	\$143	\$144	\$832
Employment	5,530	1,130	1,450	8,110

*\*All values in thousands of dollars*





## Crop Production

The crop production sector includes field crops, vegetables (including seed production), and tree and nut crops. Mushrooms are reported separately. Santa Clara County’s crop mix—measured in terms of value of production or acreage—is largely comprised of vegetables in 2014. While fruits and field crops are also significant, nut crops are only a small component. The most valuable crops in the county are bell peppers, cherries, chili and wax peppers, fresh market tomatoes, and salad greens. Crop production is labor intensive and the fresh fruits and vegetables grown in the county are especially reliant on hand labor. It follows that crop production has the highest direct employment of the sectors in the report.

The crop production sector’s direct production value in 2014 equals \$126 million and is produced on 21,073 acres. An additional \$49 million is generated indirectly or induced, for a total production value of \$175 million. The sector generates 1,550 total jobs, including 1,150 direct jobs and 400 indirect and induced jobs.

Measure	Direct	Indirect	Induced	Total
Production	\$126 million	\$14 million	\$35 million	\$175 million
Value Added	\$101 million	\$10 million	\$23 million	\$135 million
Employment	1,150 jobs	150 jobs	250 jobs	1,550 jobs



- Of the commodities included in the crop production sector, vegetables contribute a total of \$97 million to direct production value, fruits and nuts contribute \$25 million, pasture and rangeland contributes \$4 million, and grain hay contributes \$830,000, annually.
- Santa Clara County ranks 4<sup>th</sup> nationally in the value of pepper production.
- There are just over 1,000 farms in Santa Clara County with an average farm size of 225 acres.
- Strong domestic and international demand for the healthy fruits and vegetables produced in Santa Clara County continues to push prices for these commodities higher.





## Mushrooms

Santa Clara County is the second largest producer of mushrooms in California, with roughly a third of the state’s mushroom production being grown on fewer than ten commercial mushroom farms. California ranks as the second largest producer of mushrooms in the United States behind Pennsylvania, which accounts for over half of the nation’s mushroom production. The predominant mushrooms grown in Santa Clara County are white and brown varieties of *Agaricus bisporus*, commonly referred to as button, Crimini and Portabella mushrooms. Mushrooms are grown fifty-two weeks a year, providing full-time, year-round employment opportunities. Mushrooms are generally hand harvested and pickers are compensated based on pounds harvested. Inputs such as compost materials and spawn are largely purchased outside the county and the mushrooms produced in Santa Clara County are sold throughout North America. Mushroom production has an incredibly high value per acre—per square foot, even—as the mushrooms are grown in stacked trays in climate controlled rooms, and each tray is picked multiple times during the production cycle.

Measure	Direct	Indirect	Induced	Total
Production	\$71 million	\$11 million	\$18 million	\$100 million
Value Added	\$49 million	\$10 million	\$15 million	\$74 million
Employment	575 jobs	90 jobs	105 jobs	770 jobs



- **Santa Clara County grows one-third of California’s mushrooms on less than 10 farms.**
- **The value of mushrooms produced in Santa Clara County has increased by 20 percent over the last 10 years.**
- **California produces around 15 percent of total mushrooms produced in the United States, second only to Pennsylvania. In other words, Santa Clara County alone accounts for around 5 percent of all mushrooms produced in the United States.**
- **Mushrooms produced in the county can be found on pizzas, at local grocery stores, and as inputs to local food manufacturing and processing.**



## Nurseries

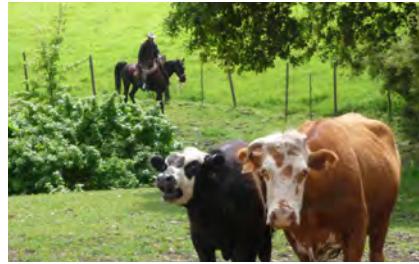
The nursery sector includes bedding plants, Christmas trees, ornamental trees, roses and shrubs (including asters, carnations, delphiniums, eucalyptus, gardenias, lisianthus, snapdragons, stephanotis, and sunflowers), chrysanthemums, and other miscellaneous crops (including herbaceous perennials, indoor decoratives, orchids, propagative materials, turf, etc.). The nursery sector is incredibly diverse in terms of size of operation, number and type of commodities produced, and product distribution. One commonality among nurseries is that they typically generate high value products on a relatively small footprint, resulting in high revenue per acre. Nursery sales benefit from the nearby urban population and nursery operators often cite proximity to Bay Area cities as a positive factor. The indirect and induced impacts of the nursery sector—in both production value and employment—are relatively high compared to other sectors. This is in part because nursery products are somewhat more likely to be sold within the county or, as is the case with vegetable transplants, to be used as an input for another agricultural sector in the county.

Measure	Direct	Indirect	Induced	Total
Production	\$83 million	\$9 million	\$24 million	\$116 million
Value Added	\$57.5 million	\$6.5 million	\$16 million	\$80 million
Employment	670 jobs	80 jobs	170 jobs	920 jobs



- **The nursery sector is the highest-valued crop sector in Santa Clara County.**
- **Santa Clara County is second only to San Diego County in total number of cuttings, seedlings, and plugs operations.**
- **California accounts for nearly 25 percent of total U.S. nursery exports annually.**





## Livestock

The livestock production sector includes beef cattle production, and miscellaneous animal production (e.g., chicken eggs, goats, llamas, pigs, and sheep). The predominant animal operations are family run cow-calf beef cattle. This sector is particularly self-sustaining, using minimal hired labor and relying on few outside inputs except leased private and public land for forage. The off-farm transactions that do take place are often outside of the county, such as when steers and heifers are sold at auction and bulls are purchased for breeding stock. As a result, the indirect and induced impacts for the livestock sector are generally lower than for other sectors.

The direct production value of the industry equals \$14 million on 222,652 acres of rangeland. The sector generates a total of 90 jobs. In addition to contributing to the local economy directly, the livestock sector provides important ecosystem services by preserving Santa Clara County grazing land. The benefit of these ecosystem services is not included in the economic values presented below.

Measure	Direct	Indirect	Induced	Total
Production	\$14 million	\$2 million	\$2 million	\$18 million
Value Added	\$6.5 million	\$1.5 million	\$1.4 million	\$9.5 million
Employment	55 jobs	20 jobs	15 jobs	90 jobs

- **The livestock sector contributes significant economic value by preserving open space. Open hills and rolling rangeland add to the majestic beauty of Santa Clara County. Careful economic analysis is required to determine the value that these intangible amenities provide to the community, but they can be as much as several hundred dollars per acre.**
- **Santa Clara County grazing land provides wildlife corridors, habitat for plants and animals, diverse ecosystem, carbon sequestration, soil benefits, space for recreation, and improves biodiversity.**







## Wineries and Agritourism

The winery and agritourism sector includes wine production and sales (on-site and off-site), and commercial agricultural enterprises conducted for the enjoyment or education of visitors, such as weddings and events. These ancillary activities generate new visits as well as repeat customers, increase wine sales, diversify revenue streams, engage the public, and strengthen the brand experience. Agritourism activities such as weddings and events often reach a different part of the economy than other agricultural activities and the indirect and induced effects in this sector include vendors hired for events.

Santa Clara County boasts over sixty licensed wineries and is represented by five American Viticultural Areas - the Santa Cruz Mountains, Santa Clara Valley, Central Coast, San Francisco Bay, and Pacheco Pass appellations. Wine production in Santa Clara County began with grapes grown at the Mission Santa Clara. The region is referred to by noted wine historian Charles L. Sullivan as “the original premium wine growing region in the modern era of winemaking in America.”

Measure	Direct	Indirect	Induced	Total
Production	\$269.5 million	\$69 million	\$46 million	\$385 million
Value Added	\$108 million	\$42 million	\$30 million	\$180 million
Employment	655 jobs	270 jobs	320 jobs	1,245 jobs

**Wineries** are measured distinctly from wine grape production, although sometimes combined on the same premises. Grape (vineyard) production requires a different set of inputs and receives revenue based on production tonnage (crush volume). Wineries use grape crush as an input in the wine making process, and



receive revenue from the final sale of wine. Because of these differences, grape production (vineyard) is analyzed separately from wineries, and included in the crop production sector.

Santa Clara County boasts more than 40 **Farmers’ Markets** held on a weekly basis, generating important agritourism revenues for the county.

**The Gilroy Garlic Festival** generates over \$2 million in direct sales revenue and is attended by more than 100,000 people annually.



## Support Industries

The support industries sector includes labor contractors, consulting and management service, and custom farming operations. County agricultural support industries have diminished over the years as farming and ranching has declined. Farm labor contractors are critical for modern agriculture, particularly in a county like Santa Clara with a high volume of labor intensive fresh fruit and vegetable production. Farm labor contractors act as a broker of agricultural labor, finding and facilitating stable work for farm laborers and providing employers with reliable and timely laborers to meet their staffing needs. Custom farming operations also serve a valuable function for core agricultural activities by offering a fee-for-hire service. These businesses fill a niche such as custom disking for weed management or custom harvesting with specialized equipment that individual farming operations cannot feasibly own themselves. Consulting and management services include vineyard management, a service that is used by many rural homeowners with small vineyards in the Santa Cruz Mountain communities of Los Altos, Saratoga, and Los Gatos.



Measure	Direct	Indirect	Induced	Total
Production	\$56 million	\$2.7 million	\$17.5 million	\$76 million
Value Added	\$52 million	\$2 million	\$13 million	\$67 million
Employment	1,040 jobs	15 jobs	135 jobs	1,190 jobs

- **Agricultural support industries is one of the highest value added industries in Santa Clara County. This sector relies primarily on direct hired labor, through farm labor contractors or custom farming operations, and salaries paid to these employees contribute directly to the Santa Clara County economy.**
- **The viability of the agricultural support industries sector directly depends on primary crop production in Santa Clara County. These businesses exist to serve core agricultural activities, and if these activities decline, or move outside of the county, the support industries sector contracts.**



## Primary Processing

The primary processing sector includes those industries which directly process crop products in Santa Clara County. This includes both production that originates in the county and production that is sourced from elsewhere. Flower and seed wholesaling are included in this sector. In some instances, primary processing facilities are operated in conjunction with a farming operation. These industries process raw product into diced, pureed, roasted, pickled, canned, dried and dehydrated, and frozen and individually quick-frozen (IQF) products that often serve as an ingredient in a more complex product or are bound for food service. Processing facilities are capital intensive and the type of processing facilities changes as the crop mix in Santa Clara County changes, from prune dehydrators and tomato canneries to pepper processors and garlic dehydrators.

Measure	Direct	Indirect	Induced	Total
Production	\$334 million	\$74 million	\$50 million	\$458 million
Value Added	\$101 million	\$10 million	\$23 million	\$211 million
Employment	870 jobs	340 jobs	345 jobs	1,555 jobs

- **Primary processing includes flower and seed wholesaling, an important and growing industry in Santa Clara County. Seed production is also included in the primary crop production sector and as a primary input to the nurseries sector.**

- **The primary processing sector additionally includes research and development operations in Santa Clara County. Agricultural research and development is critical to achieving sustainable improvements in farm productivity. At a time when public funding for agricultural research and development has slowed, it is essential for private businesses to continue to innovate in order to meet growing world food demand.**





## Food Manufacturing

The food manufacturing sector includes those industries which produce food products related to agriculture and may be partially sourced from other areas. These industries include fat and oil refining and blending, frozen fruits, juices and vegetable manufacturing, frozen specialties manufacturing, canned fruit and vegetable manufacturing, canned specialties, cheese manufacturing, animal (excluding poultry) slaughtering, meat processed from carcasses, tortilla manufacturing, and all other food manufacturing. These industries may source raw product from Santa Clara County farmers and may also purchase processed product from Santa Clara County’s primary processors. Food manufacturing is another link in the agricultural economy that benefits from local agricultural production.

Measure	Direct	Indirect	Induced	Total
Production	\$212 million	\$40 million	\$20 million	\$272 million
Value Added	\$38 million	\$26 million	\$13 million	\$77 million
Employment	525 jobs	180 jobs	140 jobs	845 jobs



- **The food manufacturing sector includes a number of different industries. Frozen product manufacturing was the highest value sub-sector, generating \$102 million in direct production value. Meat processing and slaughtering generated \$39 million in direct production value, cheese manufacturing generated \$29 million, and other miscellaneous food manufacturing generated \$42 million.**
- **The food manufacturing sector sources a portion of inputs from outside of Santa Clara County. As such, this sector does not depend on primary crop production in Santa Clara County as much as the other sectors included in the analysis.**

# Ecosystem Services

Ecosystem services provide value to residents but there is no market where they can be directly bought and sold. The value of ecosystem services is established using alternative methods. For example, open space is not sold, but it is common knowledge that houses with a good view will sell for a higher price. Economists use this to estimate the value of open space. This study does not include a primary analysis of ecosystem service values and instead relies on a meta-analysis of primary studies completed in other areas.

Flood control and land subsidence were motivating factors for the formation of a water management agency in the county. Agencies sought to prevent costly and widespread flooding and subsidence due to groundwater overdraft.

Agricultural fields can provide a space for short-term flooding, and provide the same degree of flood control while avoiding expensive levees and dykes. The value of flood control is estimated between \$40 and \$85 per acre farmed.

The deep percolation of irrigation water applied to the fields provides additional recharge over and above natural recharge. While the average irrigation system in Santa Clara County has a high water use efficiency, there will always be the need for some deep percolation to maintain water quality in the crop root zone. The value of this recharge is estimated between \$55 and \$70 acre.

The third water based ecosystem service provided by crop production is improved water quality from stabilization of erosion, filtering by boundary irrigation ditches, and beneficial biological action. The estimated value of water quality is \$25 to \$30 per acre.

Pollination and biodiversity measure the habitat value of agricultural land. Such biodiversity benefits are extremely hard to estimate because most people are unable to precisely define different levels of biodiversity and the corresponding value. Pollination and biodiversity values are estimated between \$20 and \$65 per acre.

Value Open space on or near the rural-urban fringe is critical in the county. A study of open space values in Southern California concluded that rangeland provided more open space benefits than cropland. Taken together, the estimated range is \$450 - \$1,000 per acre.

Clearly a justification for the agricultural resource base of land and water in Santa Clara County to urban county residents should be based on more than the value of agricultural production and employment generation. Not only is agriculture profitable, growing, and providing jobs, but it also generates self-financing ecosystem service benefits for county residents.

Service	Low Value per acre	High Value per acre
Flood Control	\$40	\$85
Recharge	\$55	\$70
Water Quality	\$25	\$30
Pollination	\$20	\$65
Biodiversity	\$20	\$30
Open Space	\$450	\$1,000

## Acknowledgements

The project team at ERA Economics was fortunate to receive excellent input, data, and feedback from key stakeholders in Santa Clara County. We very much appreciate their genuine enthusiasm for the project and timely response to prying questions by our team. In particular, we wish to thank (and others we may have missed!):

**Joe Deviney, Eric Wylde, Lori Oleson, Gary Meyer; Santa Clara County Division of Agriculture**

**Erin Gil; Santa Clara County Farm Bureau**

**Dhruv Khanna; Kirigin Cellars**

**George Guglielmo; Guglielmo Winery**

**David Gates; Ridge Vineyards**

**Jan Garrod; Cooper-Garrod Vineyard/Garrod Farms**

**Justin Fields; Santa Clara County Cattlemen's Association**

**Janet Burback; Tilton Ranch**

**Kevin O'Day; Retired Agricultural Commissioner, Rancher**

**Chris Chavez, Richard Rico; Global Mushrooms**

**Don Hordness; Del Fresh Produce**

**Robert Van Tassel; Royal Oaks Mushroom Farm**

**Matt Barerras; Monterey Mushrooms**

**Tim Chiala; George Chiala Farms/Nature Quality**

**Mike Mantelli; Christopher Ranch**

**Joe Benson; Syngenta**

**Andreas Olbring; Syngenta Flowers**

**Justin Davis; Sakata Seeds**

**Mike Bushman; Headstart Nursery**

**Bill Blocher; Western Tree Nursery**

**Haydi Boething Danielson; Boething Treeland Farms**

**Jake Smith; Santa Clara County Open Space Authority**

**Aziz Baameur, Sheila Barry, LeeAnn Ray; University of California Cooperative Extension**

**Special thanks to Estela Cabral de Lara; Santa Clara County Division of Agriculture,  
for assisting with editing and design**





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## APPENDIX G:

### REPORT - COMPARING GREENHOUSE GAS EMISSIONS FROM SOUTHERN SANTA CLARA COUNTY RANGELAND AND IRRIGATED CROPLAND & SANTA CLARA COUNTY URBAN LANDS, STEVE SHAFFER (2016)

#### Overview

Under the Sustainable Agricultural Lands Conservation Program, administered by the Strategic Growth Council of California Natural Resources Agency, there is an opportunity to fund the permanent protection of grazing and crop lands by acquiring permanent agricultural conservation easements on those highly productive lands threatened by conversion to urban uses, based on the fact that rangeland and cropland uses emit significantly less greenhouse gases (GHG) than urban land uses. Furthermore, permanently protecting agricultural land in close proximity to urban boundaries will support more compact urban development resulting in additional reductions of GHG emissions.

The purpose of this work is to more precisely quantify GHG emissions (or sequestrations) from existing rangeland and cropland by modeling these crops using both the DeNitrification DeComposition (DNDC) model developed by Applied GeoSolutions, LLC and the Cool Farm Tool (CFT) calculator developed by the Sustainable Food Lab, Cool Farm Alliance, a project of Ag Innovations Network. Results from these modeling activities are combined to obtain better estimates of GHG emissions from agricultural lands.

This report covers an estimation of greenhouse gas emissions from rangeland and five irrigated crops including permanent crops, field crops and annual vegetable crops that represent in aggregate greater than 233 thousand acres and 95% of agricultural land in Santa Clara County. These results are then compared to existing information for GHG emissions from ten cities in the county.

The results show that on a per acre basis, GHG emissions from all agricultural land uses in Santa Clara County are similar to each other, and substantially less than GHG emissions from cities in the county. (Chart 2, page 9)

#### Introduction

Climate Change, resulting from human caused emissions of greenhouse gases (carbon dioxide, methane, nitrous oxide, and small amounts of other industrial gases) is occurring with scientific certainty. According to the International Panel on Climate Change, the fifth of eight keys risks identified with a high level of confidence is, "Risk of food insecurity and the breakdown of food systems linked to warming, drought, flooding, and

precipitation variability and extremes...<sup>i</sup> To address this, and others risks of climate change, both mitigation of greenhouse gas emissions and adaptation to a changing climate are needed. While farming is a source of greenhouse gases, it can also capture and store atmospheric carbon. The multiple benefits of food, fiber and renewable energy production, watershed enhancement and climate change mitigation and adaptation provided by farmland make it one of our nation's most valuable assets as we move into a more uncertain future.

Nowhere is the climate change risk to agriculture greater than in California. Recent university studies<sup>ii</sup> project that, if current GHG trends continue, cropland in the Central Valley could decline by well more than 1.5 million acres (about 20%) due to shrinking irrigation water supplies, and that the warming of night-time temperatures could render wide expanses unsuitable for production of the tree and vineyard crops that are the mainstay of the region. Moreover, due to sea level rise, the vast Sacramento-San Joaquin Delta is experiencing increased irrigation water salinity levels, higher flood risk for agricultural islands due to levee failures and habitat mitigation for water supply projects that convert agricultural lands to wetlands. Thus, it is important to preserve and enhance agricultural production capabilities in other regions of the state.

California agriculture is a national and global resource. It produces approximately 50% of the nation's vegetables, fruits, and nuts, and 20% of the nation's milk supply. It is also the world's primary source of almonds, walnuts, pistachios and processing tomatoes. It produces more than 400 different crops.<sup>iii</sup> While agricultural lands (cropland and grazing lands) represent a third of California's 100 million acres, only 8 million acres is irrigated cropland.<sup>iv</sup> This is also the land most threatened by conversion to urban uses. The January 2013 American Farmland Trust (AFT) report, *Saving Farmland, Growing Cities* provides an excellent account of the amount of cropland threatened by urban conversion versus the amount of land needed to accommodate population growth under various land use scenarios.<sup>v</sup> Just as a rationale has been successfully made to incentivize avoided conversion of grasslands and forest lands,<sup>vi vii</sup> so too has a case been made to support the avoided conversion of cropland.

According to the Santa Clara County agricultural commissioner<sup>viii</sup>, agriculture was the most significant industry in the Santa Clara Valley until the rapid development of the technology industry, starting in the 1960s. Known as The Valley of Hearts Delight, some of the largest canneries, dried fruit packers and fresh produce packers and shippers in the world had their operations here. By the mid-1970s much of the industry was gone. However that which remains provides a diverse bounty of agricultural products and other amenities such as open space and wildlife habitat.

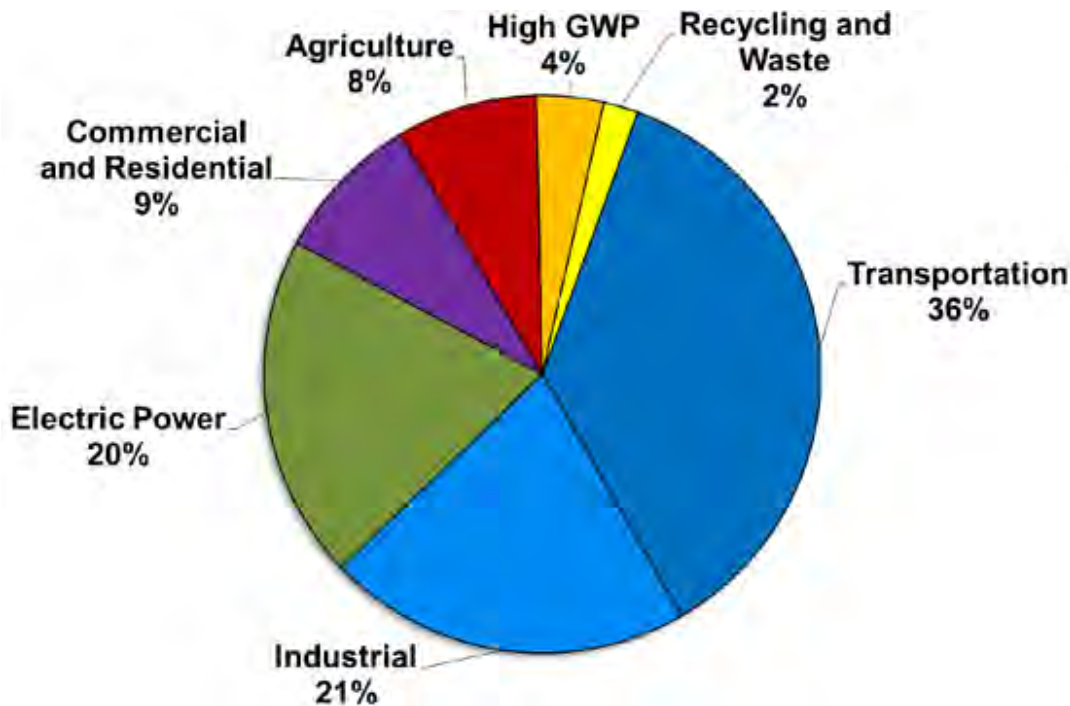
While by value, nursery crops grown in greenhouses and mushroom production dominate, their acreage is relatively small, less than 700 acres. The predominant agricultural land use is rangeland, but greater than 15,000 acres of highly productive irrigated cropland remains, producing peppers, tomatoes, a large variety of cool season vegetables, beans, tree fruit, grapes, corn and garlic, among other crops.

This report provides a more detailed assessment of the value of the strategy to permanently protect agricultural land from urban conversion by better quantifying the GHG emissions from five irrigated cropping systems and rangeland in Santa Clara County. This work builds on a state-wide analysis by AFT in 2015.<sup>ix</sup>

**Greenhouse Gas Emissions**

In California, 80% of GHG emissions is CO<sub>2</sub>, 9% is methane, 6% is black carbon and 2% is N<sub>2</sub>O. The remainder is the small amounts, but high potency industrial gases. In 2012, the California agricultural sector accounted for approximately 8% of California emissions, equivalent to 35.2 MMtCO<sub>2</sub>e. Two thirds of those emissions are due to methane emissions from dairy (and beef) cattle. Approximately 25% is due to N<sub>2</sub>O emissions associated with fertilizer use and the remaining 8% to 9% of agricultural emissions is due to diesel fuel combustion.<sup>x</sup>

**Chart 1  
2014 GHG Emissions by Sector  
CARB GHG Inventory Trends**



*Methodology Used to Calculate Greenhouse Gas Emissions from Crop Production*

Crop production causes changes in the biogeochemistry of soil, water and air that are one source of greenhouse gases from agriculture. For example, cultivating the soil exposes it to air, causing some of the organic carbon contained in it to oxidize into carbon dioxide (CO<sub>2</sub>) that is released into the atmosphere. On the other hand, incorporating organic matter such as crop residue (stalks, leaves, etc.) into the soil increases soil carbon (sequestration). The measure of the increase or decrease in soil organic carbon is referred to as “dSOC.”

Changing the water content of soil through irrigation can increase or decrease the amount of biological activity in soil, primarily of microbes that convert inorganic and organic forms of nitrogen present in soil into compounds needed by plants for growth. But the process also produces nitrous oxide (N<sub>2</sub>O), a potent greenhouse gas with 300 times the global warming potential of a comparable amount of CO<sub>2</sub>. Fertilization adds reactive nitrogen, some of which is also oxidized to produce N<sub>2</sub>O. Also, when microbes break down organic matter in the absence of oxygen as, for example, crop residue in flooded rice fields (and in the guts of cattle and other ruminant animals), the process of anaerobic decomposition produces methane (CH<sub>4</sub>), another greenhouse gas that is 25 to 34 times as potent as carbon dioxide over a hundred year time frame.

For purposes of this report, the greenhouse gas emissions from these biogeochemical changes from the production of California crops were calculated using the DeNitrification-DeComposition Model (DNDC) developed at the University of New Hampshire<sup>xi</sup>. The results reported here came directly or were deduced from previous analyses of specific crops sponsored by the California Almond Board (almonds), California Vintners Association (wine grapes) and CARB (tomatoes, lettuce and corn).<sup>xii</sup> These crops collectively represent 11,600 acres of irrigated cropland in Santa Clara County (Table 1). The data presented in this report are based on the DNDC model as developed by Applied GeoSolutions (AGS), who aggregated the findings for AFT.

Table 1 –Santa Clara Crops Studied by Acreage and Value

Crop	Acres (2012)	Value (2012)
Cool season vegetables	4,500	\$23,500,000
Corn	1,100	\$3,700,000
Peppers	2,100	\$14,000,000
Rangeland	222,900	\$2,700,000
Tomatoes (Processing)	1,000	\$4,000,000
Tree fruit & nuts (deciduous)	1,300	\$10,000,000
Wine grapes	1,600	\$7,200,000
Total	234,500	\$65,100,000

The DNDC model does not attempt to estimate emissions from farming activities conducted above ground. To calculate these emissions, the Cool Farm Tool (CFT) was used. The CFT was developed by Unilever Corporation and researchers at the University of Aberdeen (Scotland) in collaboration with the Sustainable Food Lab<sup>xiii</sup>. Sustainable Food Lab is a project of Ag Innovations Network. CFT is a farm-level greenhouse gas emissions calculator that provides scenario modeling and emissions evaluation of practices that farmers employ in the field, including operation of machinery, irrigation, application of fertilizers and pesticides and management of crop residue. It also takes into account life cycle emissions from the upstream production of agricultural inputs such as fertilizer and other agricultural chemicals and electricity. For purposes of this analysis, data on energy (diesel, gasoline, electricity), water, fertilizer and other inputs were obtained from the University of California Cooperative Extension Service’s Crop Production Cost and Return studies, which are considered the definitive source of this kind of information.<sup>xiv</sup> Some parameters were adjusted for local conditions based on data obtained from Santa Clara County Cooperative Extension and from the Santa Clara Valley Water District, such as average water pumping depths and crop water use.<sup>xv</sup>

*Results of Agricultural Greenhouse Gas Emissions Analysis*

The DNDC model calculates emissions of methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O), changes in soil organic carbon (dSOC) as a measure of CO<sub>2</sub> emissions or carbon sequestration, as well as their sum total, expressed as Global Warming Potential (GWP<sub>net</sub>). The reported results of the analyses of total greenhouse gas emissions from biogeochemical changes for specific Santa Clara County agricultural land uses are shown in Table 2. Note that negative values indicate carbon sequestration.

Table 2 – Greenhouse Gas Emissions from Biogeochemical Changes for California Crops

Crop	Emissions Per Acre Per Year – MTCO <sub>2e</sub>			
	N <sub>2</sub> O	CH <sub>4</sub>	dSOC	GWP <sub>net</sub>
Cool season vegetables	2.49	-0.16	-0.64	1.70
Corn	2.12	-0.11	-2.88	-0.87
Peppers*	2.1	-0.2	0.5	2.4
Rangeland*	0.07	-0.01	0.65	0.72
Tomatoes (Processing)	1.37	-0.18	0.44	1.64
Tree fruit & nuts (deciduous)	0.52	0	-0.54	-0.02
Wine grapes	0.45	0	-0.29	0.15

\*Biogeochemical GHG emissions data for rangeland and peppers is very limited or non-existent. Rangeland data was obtained from Nichol Institute.<sup>xvi</sup> report NI GGMOCA R 4, pg 10 – 12. Pepper data was estimated based on tomato data and local information.

As Table 2 illustrates, greenhouse gas emissions from biogeochemical changes associated with crop production in Santa Clara County do not vary significantly, since high emitting crops such as rice and highly sequestering crops such as alfalfa are not produced.

In the mid-range, crops like cool season vegetables, peppers and processing tomatoes tend to have higher emissions than wine grapes and tree fruits and nuts because of greater applications of nitrogen fertilizers and more frequent soil disturbance. Corn emissions are marginally negative because its high consumption of nitrogen fertilizer is offset by the incorporation of crop residue, i.e., the corn stalks and leaves, back into the soil after harvest.<sup>xvii</sup> These differences among crops are reflected in a breakdown of the specific types of greenhouse gases shown in Table 2.

The other major source of greenhouse gas emissions from crop production is farming activities including plowing, planting, fertilizing and harvesting. Results of the CFT analysis of these emissions for the selected crops are shown in Table 3.

Table 3 – Sources of Greenhouse Gas Emissions from Farming Activities for Santa Clara County Crops

Crop	Emissions Per Acre Per Year – MTCO <sub>2</sub> e					Total
	Fertilizer	Pesticides	Residue Management	On-Farm Energy Use	Irrigation	
Cool season vegetables	0.213	0.050	0.188	0.609	0.186	1.246
Corn	1.23	0.12	0.21	0.43	1.04	3.04
Peppers	0.52	0.050	0.188	0.479	0.336	1.573
Rangeland	0.00	0.00	0.00	0.05	0.00	0.05
Tomatoes (Processing)	0.383	0.025	0.161	0.428	0.237	1.234
Tree fruit & nuts (deciduous)	0.119	0.042	0.283	0.245	0.249	0.938
Wine grapes	0.011	0.066	0.241	0.599	0.094	1.011

As in the case of emissions from biogeochemical changes, those from farming activities will vary depending on the specific practices employed and site-specific characteristics of the soil, weather, etc. In particular, emissions from irrigation water pumping, which are a significant percentage of total emissions for all California crops except for rangeland, vary significantly with the water source and the amount of water applied. Other factors include location, weather and irrigation method used. The CFT used horizontal and vertical distance, water quantity, power source and irrigation method to determine energy used for irrigation. Statewide energy mix averages are used in converting electricity to greenhouse gasses.

To calculate the total greenhouse gas emissions from crop production, emissions from biogeochemical changes in the soil were added to those from farming activities. These results are shown in Table 4. Again, note that a negative value indicates carbon sequestration.

Table 4 – Total Per Acre Greenhouse Gas Emissions for Santa Clara County Crops

Crop	Emissions Per Acre Per Year – MTCO <sub>2</sub> e		
	Biogeochemical Changes	Farming Activities	Total
Cool season vegetables	1.70	1.246	2.946
Corn	-0.87	3.04	2.17
Peppers	2.4	1.573	3.973
Rangeland	0.72	0.05	0.77
Tomatoes (Processing)	1.64	1.234	2.874
Tree fruit & nuts (deciduous)	-0.02	0.938	0.918
Wine grapes	0.15	1.011	1.161

Total greenhouse gas emissions from Santa Clara County’s leading crops vary, but most are within the range of 1 to 4 MTCO<sub>2</sub>e per acre per year, except rangeland which is lower, since little or no inputs from management activities occurs. As shown in Table 5, the weighted average of the emissions from the selected crops, based on the acreage planted, is 0.86 MTCO<sub>2</sub>e per acre per

year. This is very close to the 0.85 MTCO<sub>2</sub>e per acre per year average determined by Jackson, et al., for Yolo County<sup>xviii</sup> and the per acre state-wide average calculated by AFT<sup>xix</sup>.

Table 5 – Annual Per Acre Greenhouse Gas Emissions for Leading Santa Clara County Crops

Crop	Emissions/Acre/Year MTCO <sub>2</sub> e	Acres Planted	Total Annual Emissions	Weighted Average
Cool season vegetables	2.946	4,500	13,257	
Corn	2.17	1,100	2,387	
Peppers	3.973	2,100	8,343.3	
Rangeland	0.77	222,900	171,633	
Tomatoes (Processing)	2.874	1,000	2,874	
Tree fruit & nuts (deciduous)	0.918	1,300	1,193.4	
Wine grapes	1.161	1,600	1,857.6	
Total		234,500	201,545.3	0.859

### Greenhouse Gas Emissions from Urban Land Uses

On a *per acre* basis, urban land uses tend to generate significantly more greenhouse gases than crop production and other agricultural uses. The primary source of urban emissions is the combustion of fossil fuels to generate energy for homes, commercial buildings, industry and transportation. Emissions from landfills and sewage treatment plants are another significant source, as is the use of energy for pumping water.

#### *Methodology Used to Calculate Greenhouse Gas Emissions from Urban Land Uses*

To meet greenhouse gas reduction goals established under the Global Warming Solutions Act (AB 32), many California cities conducted inventories of their greenhouse gas emissions as baseline information in the development of Climate Action Plans.<sup>xx</sup> To do so, they used a standardized methodology developed by the California Statewide Energy Efficiency Collaborative. These figures were used, as reported by the cities for which data were available. To calculate *per acre* urban emissions total emissions were divided by the land area of the respective cities as reported by the U.S. Census Bureau.<sup>xxi</sup>

#### *Results of Urban Land Use Greenhouse Gas Emissions Analysis*

The greenhouse gas emissions reported by the selected cities are shown in Table 6. City GHG emissions are comprised of emissions from transportation, residential, commercial and industrial and landfill and water treatment operations.

Citywide greenhouse gas emissions from urban land uses vary widely. There is a five-fold difference between the highest and lowest total emissions among the cities we analyzed. Not surprisingly, larger cities tend to have higher greenhouse gas emissions, with notably higher emissions from industry and transportation. The average of the cities we reviewed in Santa Clara County is 1.39 million metric tons per year and the median is 765 thousand metric tons per year.

Per acre greenhouse gas emissions also vary significantly from city to city, but the range is much narrower than for total emissions, as shown in Table 6. The weighted average greenhouse gas emissions among the cities is 69.2 MTCO<sub>2</sub>e per acre per year. In general, the per acre greenhouse gas emissions from the cities studied tend to be somewhat higher than the 61.5 tons per acre that Jackson, et al., determined to be the average for Yolo County urban areas and significantly higher than the statewide average of 51 tons per acre as reported by AFT.

Table 6 – Per Acre Greenhouse Gas Emissions for California Cities

City	Total Annual Emissions	Land Area (Acres)	Annual Emissions Per Acre (MTCO <sub>2</sub> e)	Weighted Average
Cupertino	307288	7204	42.7	
Gilroy*	336056	10333	32.5	
Los Altos	182830	4152	44.0	
Milpitas	744150	8698	85.6	
Morgan Hill	279407	8244	33.9	
Mountain View	786954	7677	102.5	
Palo Alto	496069	15286	32.5	
San Jose	7612000	112977	67.4	
Santa Clara	1854300	11780	157.4	
Sunnyvale	1270170	14072	90.3	
<b>Total</b>	<b>13869224.5</b>	<b>200423</b>		<b>69.2</b>

**Comparison of Greenhouse Gas Emissions from Crop Production and Urban Areas**

There are significant variations in greenhouse gas emissions for both crops and urban areas, therefore the difference between the two sources will also vary widely with the specific crops being displaced by urban development – and, over the longer term, by whatever crops may be grown on the land in the future. Indeed, both the particular farming practices used on the land (for example, the application of more or less fertilizer or water) and the type of urban development (high or low density, conventional versus LEED-certified buildings, etc.) that replaces agriculture will further influence the change in greenhouse gas emissions on any given acre of land when its use changes.

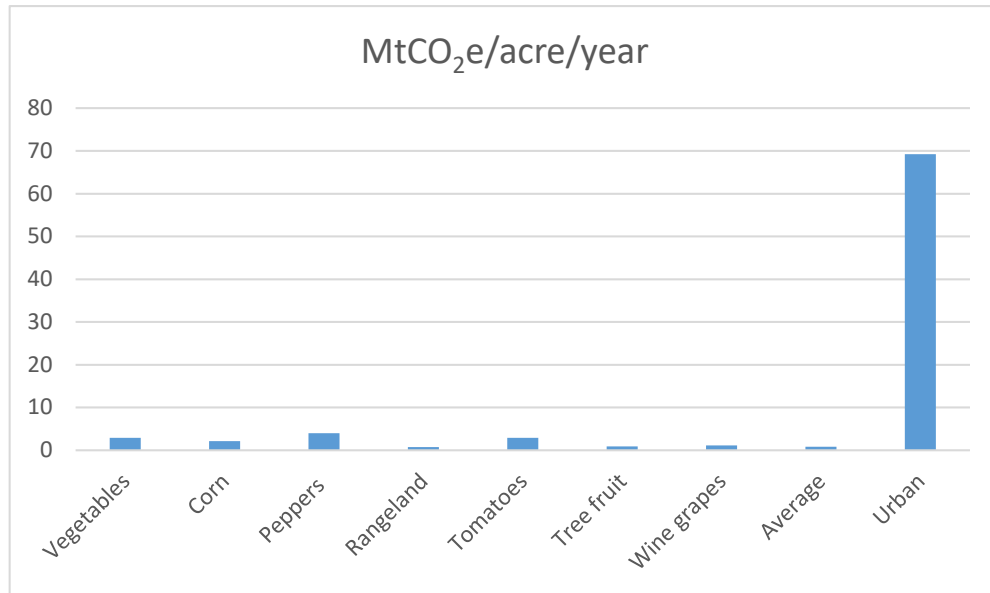
Because of these variations, attempting to determine the change in emissions when any given parcel of farmland is converted to urban use with this kind of exactitude would appear to be counterproductive and unnecessary for purposes of justifying a general policy of encouraging farmland conservation and protection as a strategy for reducing greenhouse gas emissions. It should be sufficient for purposes of establishing such a policy to demonstrate that there is a reliably significant increase in emissions, within a given range, whenever cropland is converted to urban use.

Chart 2 summarizes annual emissions per acre from the six agricultural land uses analyzed compared to the average annual emissions per acre of urban land in Santa Clara County. On average, these calculations show that the annual per acre greenhouse gas emissions from the production of Santa Clara County crops average 68.3 tons per acre lower than the emissions from urban areas in the county (Table 7). This is higher, but still comparable to the 60.7 MT per acre per year difference found by Jackson, et al., in their study of Yolo County emissions. This translates into a multiple of nearly 77 times higher greenhouse gas emissions from urban areas than from agricultural land, again with close agreement to the 70-fold difference calculated by



Jackson. This result is greater than the difference of 50.4 MT per acre resulting in a 58 fold difference calculated by the AFT state-wide analysis.

**Chart 2**



**Table 7 – Comparison of Greenhouse Gas Emissions from California Crops and Urban Areas**

	Annual Per Acre Emissions (MTCO <sub>2</sub> e)		
	Maximum	Weighted Average	Minimum
Crop Production	3.97	0.86	0.77
Urban Areas	157.4	69.2	32.5
Difference	153.4	68.3	31.7
Multiple (Urban: Crops)	39.6	76.7	42.2

**Potential Climate Benefits of Reducing Greenhouse Gas Emissions Through Farmland Conservation and Protection**

Based on the average differential (68.3 MTCO<sub>2</sub>e/acre/year) between emissions from crop production and urban land uses in Santa Clara County, for each 1,000 acres of county farmland not converted to urban use, the annual greenhouse gas savings would be equivalent to taking 13,400 cars off the road and reducing vehicle miles travelled by more than 160 million miles<sup>xxii</sup> (Table 8). If farmland conservation and protection programs could halve the average annual conversion of 39,500 acres of California agricultural land to urban uses,<sup>xxiii</sup> within a decade a total of about 110 million MTCO<sub>2</sub>e of greenhouses gases could be avoided, with a climate benefit equivalent to reducing VMT by more than 258 billion miles.

Table 8 – Equivalent Reduction in Greenhouse Gases and VMT from Auto Travel

	Crop Production	Urban Land Uses	Difference
Emissions (MTCO <sub>2</sub> e/Acre/Year)	0.86	69.2	68.3
Emissions Per 1,000 Acres	859	69,200	68,341
Equivalent Number of Autos	168	13,568	13,400
Equivalent Annual VMT (Millions)	2.02	162.8	160.8

**Conclusions and Observations**

There is enough information available to perform a site specific analysis for permanently protecting agricultural land from conversion to urban uses. The Sustainable Agricultural Land Conservation Program relies on a land use emissions calculator tool – the California Emissions Estimator Model (CalEEMod)<sup>xxiv</sup>. However, this tool only quantifies vehicle miles traveled (VMT) reduction benefits and does not account for energy use in buildings (electricity, natural gas, emissions from water treatment and waste management) nor for up-zoning conversion effects. Other analytical tools including those used for this report should also be used to estimate the full benefits of avoiding farmland conversion. Tools such as UrbanFootprint<sup>xxv</sup> developed by Calthorpe Analytics can also account for trade-offs of preserving agricultural land and still accommodating future population growth through increasing densities using a smart growth development plan. AFT and Calthorpe have reported on this issue.<sup>xxvi xxvii</sup>

This compilation of data and its analysis corroborates the groundbreaking research done by Jackson, et al., demonstrating that when agricultural land is converted to urban uses, greenhouse gas emissions increase by at least an order of magnitude, regardless of the crop being grown on the land or the type of urban development that replaces agriculture. American Farmland Trust believes that this finding supports a policy of investing cap-and-trade revenue from AB 32 in programs that effectively conserve and protect agricultural land. This analysis clearly shows the benefits of protecting agricultural land threatened by urban development in Santa Clara County from conversion.

Though the terms “conservation” and “protection” of farmland are often used interchangeably, they not the same thing. And both are instrumental in maintaining the agricultural land base and its public benefits, whether related to food production, climate change or other needs such as watersheds or habitat.

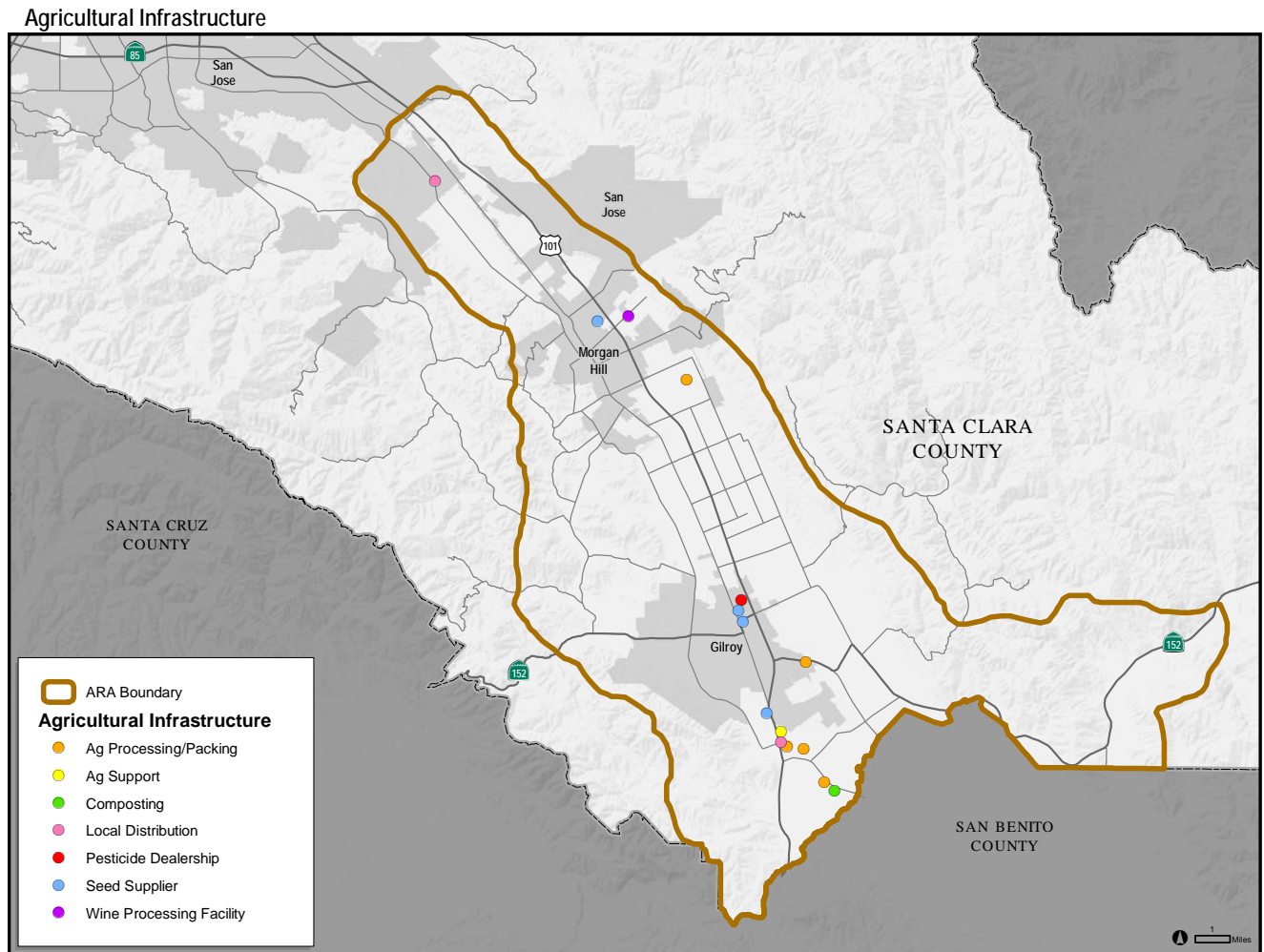
Conservation of farmland, properly understood,<sup>xxviii</sup> entails minimizing its conversion to nonagricultural uses by preventing its unnecessary or premature development, generally through conscientious planning and appropriate land use policies. This is critical to establishing a favorable environment for long-term investment in agriculture – including investment in agricultural easements. Farmland conservation plans and policies also complement and reinforce the strategy of promoting urban infill and more efficient (higher density) suburban development – which has the reciprocal benefit of reducing farmland conversion and greenhouse gas emissions associated with it.

Because land use policies are subject to change, however, longer-term protection of farmland from development is also needed through mechanisms such as Williamson Act contracts and, ideally, perpetual conservation easements. The donation and sale of such easements are more attractive to owners of farmland in a context that assures them that urban development will not encroach on their farming operations. And as easement acquisitions multiply within a given agricultural area – particularly if concentrated along urban growth boundaries – they tend to reinforce conservation-oriented land use policies by making it less likely that those policies will be abandoned or weakened. Thus, farmland conservation and protection buttress each other, creating synergy that makes each more effective than they tend to be when pursued independently.<sup>xxix</sup>

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- <sup>i</sup> [https://www.ipcc.ch/pdf/assessment-report/ar5/wg2/WGIAR5-TS\\_FINAL.pdf](https://www.ipcc.ch/pdf/assessment-report/ar5/wg2/WGIAR5-TS_FINAL.pdf) p60.
- <sup>ii</sup> [http://s.giannini.ucop.edu/uploads/giannini\\_public/85/5e/855e56be-0d4b-4f33-a577-67e73ecef45/v18n1\\_5.pdf](http://s.giannini.ucop.edu/uploads/giannini_public/85/5e/855e56be-0d4b-4f33-a577-67e73ecef45/v18n1_5.pdf) ; [https://watershed.ucdavis.edu/files/Medellin-Azuara\\_Et\\_all\\_2012\\_Climatic%20Change10.1007\\_s10584-011-0314-3.pdf](https://watershed.ucdavis.edu/files/Medellin-Azuara_Et_all_2012_Climatic%20Change10.1007_s10584-011-0314-3.pdf)
- <sup>iii</sup> [https://www.nass.usda.gov/Statistics\\_by\\_State/California/index.php](https://www.nass.usda.gov/Statistics_by_State/California/index.php)
- <sup>iv</sup> [https://www.nass.usda.gov/Statistics\\_by\\_State/California/index.php](https://www.nass.usda.gov/Statistics_by_State/California/index.php)
- <sup>v</sup> <https://4aa2dc132bb150caf1aa-7bb737f4349b47aa42dce777a72d5264.ssl.cf5.rackcdn.com/FINALSVREPORTPDF1-14-13.pdf>
- <sup>vi</sup> <https://www.arb.ca.gov/cc/capandtrade/protocols/usforest/forestprotocol2015.pdf>
- <sup>vii</sup> <http://www.climateactionreserve.org/how/protocols/grassland/>
- <sup>viii</sup> <https://www.sccgov.org/sites/ag/news/Documents/2012%20Crop%20Report%20Pub.pdf>
- <sup>ix</sup> <https://4aa2dc132bb150caf1aa-7bb737f4349b47aa42dce777a72d5264.ssl.cf5.rackcdn.com/AFTCrop-UrbanGreenhouseGasReport-February2015.Edited-May2015.pdf>
- <sup>x</sup> [https://www.arb.ca.gov/cc/inventory/pubs/reports/2000\\_2014/ghg\\_inventory\\_trends\\_00-14\\_20160617.pdf](https://www.arb.ca.gov/cc/inventory/pubs/reports/2000_2014/ghg_inventory_trends_00-14_20160617.pdf)
- <sup>xi</sup> DNDC is a mathematical computer model that performs process-based simulations of nitrogen and carbon dynamics in agro-ecosystems. Based on environmental drivers like soil characteristics, temperature and precipitation data, crop characteristics, and crop management, the model predicts crop growth and yield, greenhouse gas emissions and other environmental effects like nitrogen leaching and runoff. The results it produces have been validated by comparison to actual field measurements over several decades of application. To calculate the greenhouse gas emissions of leading California crops, the DNDC model was used to run thousands of simulations based on hundreds of soil types throughout state, accounting for weather variability over more than 20 years. The results of these simulations were used to determine the range (5<sup>th</sup> and 95<sup>th</sup> percentiles) and average emissions. See, *Users Guide for the DNDC Model (Version 9.5)*, Institute for the Study of Earth, Oceans and Space, University of New Hampshire, August 2012
- <sup>xii</sup> D. Hunter, et al, Carbon Dynamics of Orchard Floor Applied, Chipped Almond Prunings as Influences to Cover Crop Management and Farm Practices, Final Report to the California Department of Food and Agriculture Specialty Crop Block Grant Program, 2013; A. Jordan, Field Testing a Carbon Offset and Greenhouse Gas Emissions Model for California Winegrape Growers. Final Report to the California Department of Food and Agriculture Specialty Crop Block Grant Program, 2013; California Air Resources Board, Compliance Offset Protocol, Rice Cultivation Projects; C. Li, et al, Calibrating, Validating, and Implementing Process Models for California Agriculture Greenhouse Gas Emissions, Final Report for CARB Contract Number 10—309, 2013.
- <sup>xiii</sup> The Cool Farm Tool (<http://www.coolfarmtool.org>) is a farm-level calculator that has been tested and adopted by a range of multinational companies that are using it to work with agricultural suppliers to measure, manage, and reduce greenhouse gas emissions in the effort to mitigate global climate change. It uses multifunctional models built through empirical research from a broad range of published data sets, International Panel on Climate Change (IPCC) methodology and advanced algorithms to calculate estimates from the following emissions sources:
- On-farm fuel and electricity use from tractors, irrigation, etc., utilizing standard conversion factors;
  - Fertilizer production emissions based on full life cycle analysis principles, including all relevant activities and emissions from raw material supply up to the final finished product at factory gate including all energy use and non-CO<sub>2</sub> emissions;
  - Soil carbon sequestration based on an empirical model built from over 100 global datasets; and
  - Soil nitrous oxide emissions based on an empirical model built from an analysis of over 800 global datasets.
  - Agricultural methane emissions using IPCC estimates
  - Pesticide production emissions
  - Crop residue emissions and background N<sub>2</sub>O emissions using IPCC methodology

- xiv Published on the U.C. Davis, Agricultural & Natural Resources Division Web site, <http://coststudies.ucdavis.edu/>
- xv <http://www.valleywater.org/programs/agriculture.aspx>
- xvi [https://nicholasinstitute.duke.edu/sites/default/files/ni\\_ggmoca\\_r\\_4.pdf](https://nicholasinstitute.duke.edu/sites/default/files/ni_ggmoca_r_4.pdf) p7-13.
- xvii The incorporation of residue is typically much lower when corn is used for silage (livestock feed) rather than harvested for grain or food.
- xviii <http://www.energy.ca.gov/2012publications/CEC-500-2012-032/CEC-500-2012-032.pdf> p100
- xix <https://4aa2dc132bb150caf1aa-7bb737f4349b47aa42dce777a72d5264.ssl.cf5.rackcdn.com/AFTCrop-UrbanGreenhouseGasReport-February2015.Edited-May2015.pdf>
- xx Statewide Energy Efficiency Collaborative, Climate Action Planning for Community-Wide GHG Emissions, <http://californiaseec.org/tools-guidance/climate-action-planning-for-community-wide-ghg-emissions>
- xxi [http://www2.census.gov/geo/docs/maps-data/data/gazetteer/2010\\_place\\_list\\_06.txt](http://www2.census.gov/geo/docs/maps-data/data/gazetteer/2010_place_list_06.txt)
- xxii Based on EPA estimates of annual average travel of 12,000 miles and 5.1 MTCO<sub>2</sub>e per car. Source: <http://www.epa.gov/otaq/climate/documents/420f11041.pdf>
- xxiii Department of Conservation, Farmland Mapping and Monitoring Program, *Net Important Farmland Conversion 1984-2010*. A 19,750-acre annual reduction in farmland conversion could be achieved by increasing the average density of new urban development from the current statewide average of 9 people per acre to 18 people per acre.
- xxiv <http://www.caleemod.com/>
- xxv <http://calthorpeanalytics.com/index.html#tabswrap>
- xxvi <https://4aa2dc132bb150caf1aa-7bb737f4349b47aa42dce777a72d5264.ssl.cf5.rackcdn.com/Agricultural-Land-Conservation-as-a-California-Climate-Strategy.pdf>
- xxvii <http://energyinnovation.org/wp-content/uploads/2015/11/Moving-California-Forward-Full-Report.pdf>
- xxviii Conservation: “The careful use of natural resources to prevent them from being lost or wasted.” Merriam-Webster Dictionary.
- xxix This has important implications for preventing “leakage,” which is to say the potential for the protection of some farmland to shift development toward other farmland. For further elaboration on this phenomenon, see, E. Thompson, Hybrid Farmland Protection Programs: A New Paradigm for Growth Management? 23 William & Mary Environmental Law & Policy Review 830 (Fall 1999).

# APPENDIX H: MAP OF EXISTING AGRICULTURE RELATED INFRASTRUCTURE IN SANTA CLARA VALLEY



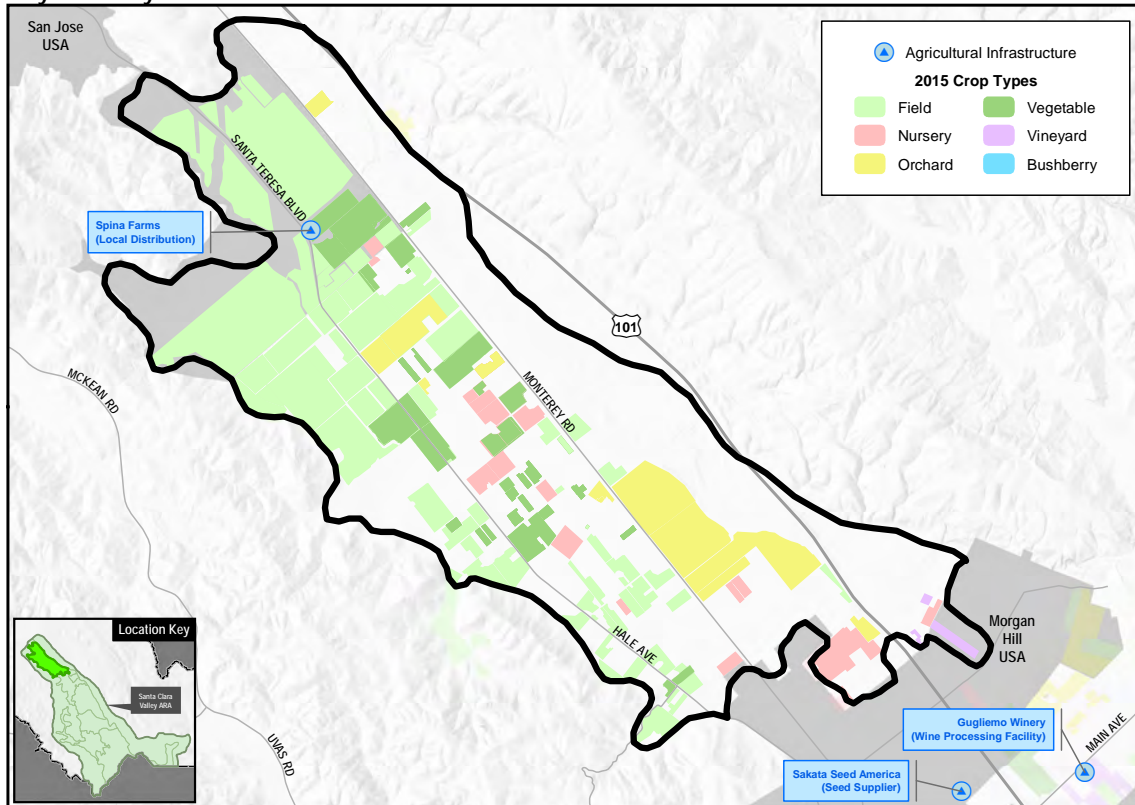
# APPENDIX I:

## ARA SUB-AREA CHARACTERISTICS AND MAPS

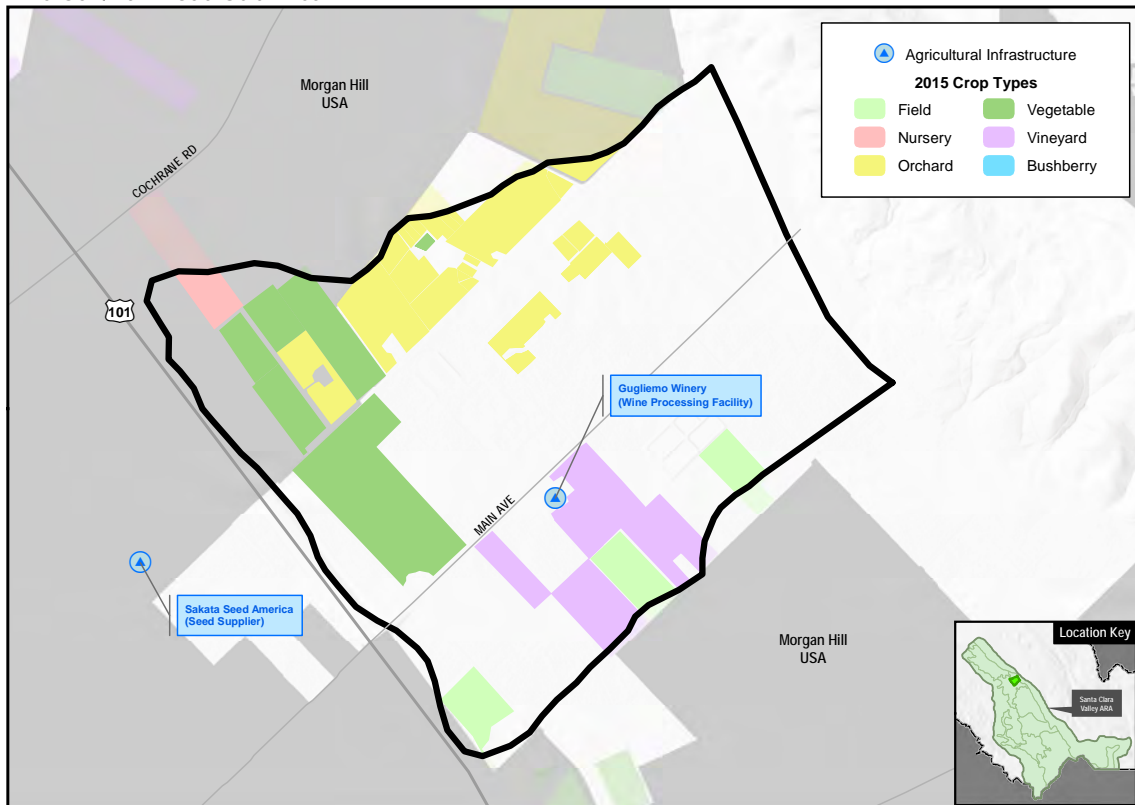
ARA Sub-Areas	Parcel Count with Farmland Soils				Top Crops (acres farmed)
	< 5 acres	5-10 acres	acres	> 20 acres	
Coyote Valley	264	121	68	46	Oats Hay Alfalfa
Live Oak/Half Road	32	9	10	2	Peppers Cherry Grape
San Martin/Tennant	1100	229	59	18	Peppers Beans Corn
Buena Vista	526	135	95	61	Corn Beans Peppers
Leavesley	237	87	110	190	Lettuce Spinach Peppers
Watsonville Road Wine Region	172	38	27	28	Grape Oats Foliage
Pacheco Pass	28	12	20	24	Tomato Apple Grape
Rangelands (Diablo Range)	82	21	38	106	Grapes Beans Apricots
Rangelands (Santa Cruz Mountain)	345	78	58	127	Wheat Oats Grape

Note: Sub-area boundaries do not represent political boundaries. ARA’s farmland and rangeland resources that lie within the Urban Service Areas of cities are not within the County’s land use authority and are outside of the County land use policies that are considered by this Valley Agricultural Plan.

### Coyote Valley Sub-Area

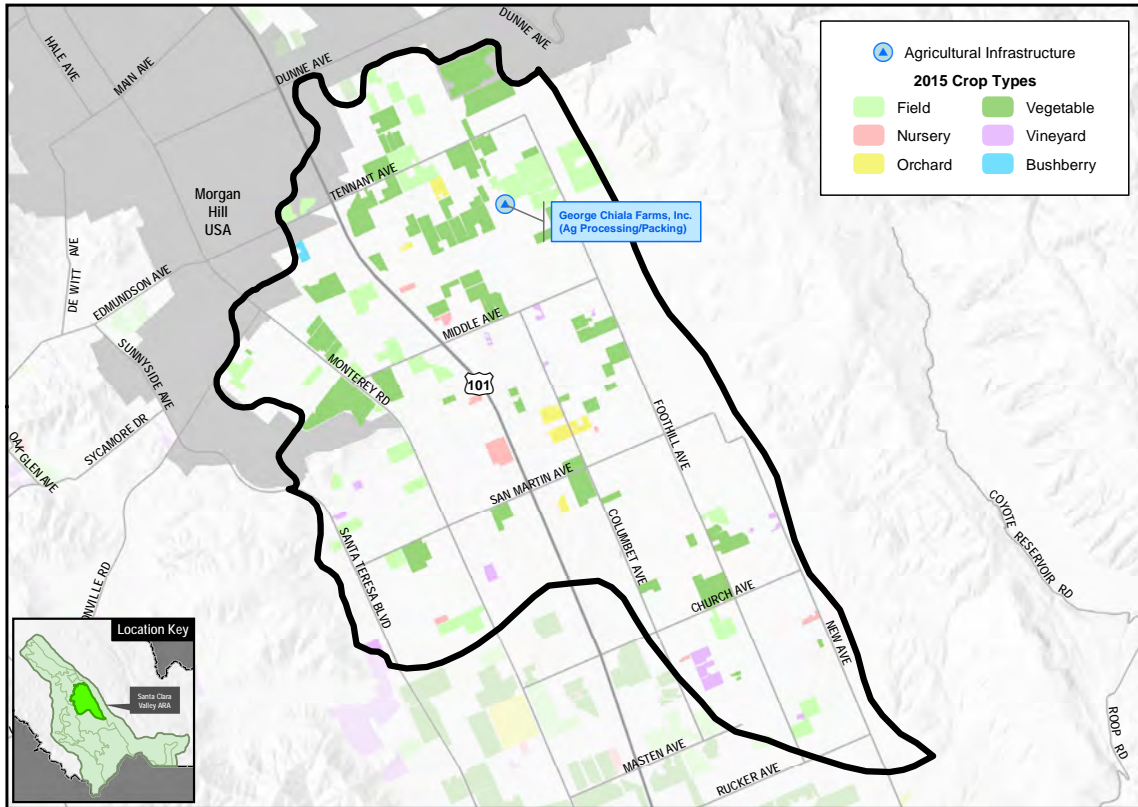


### Live Oak/Half Road Sub-Area

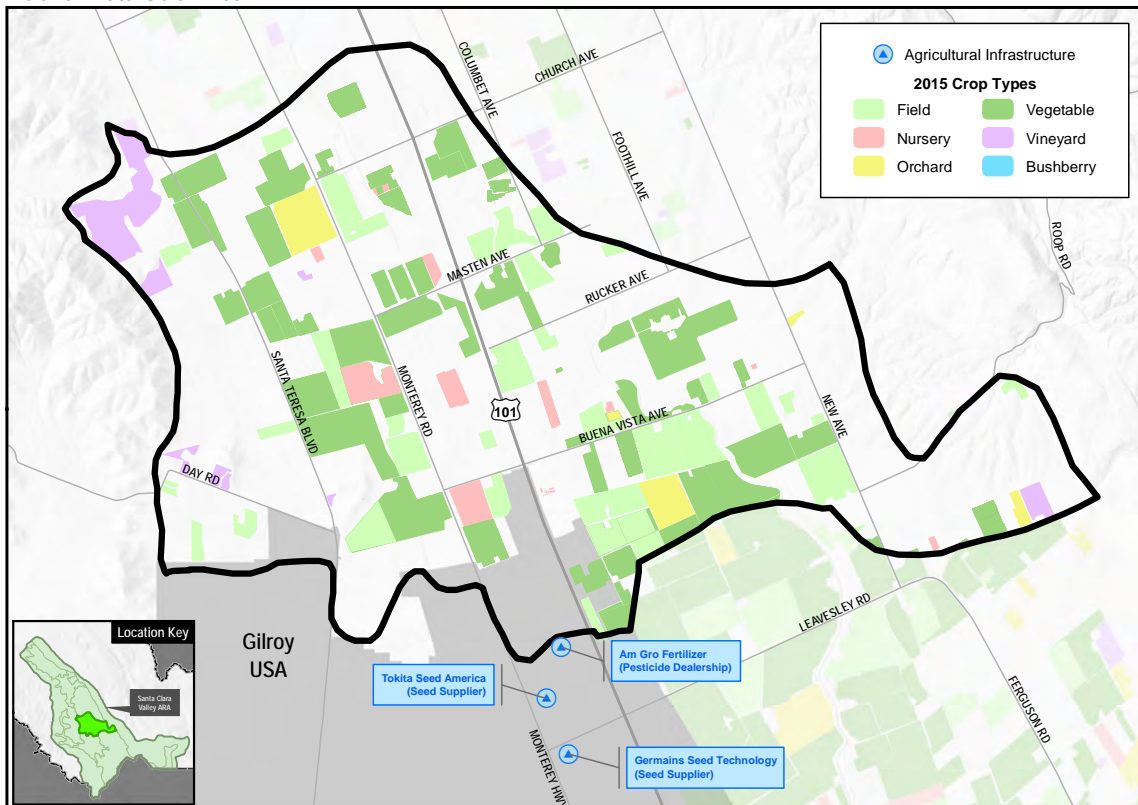




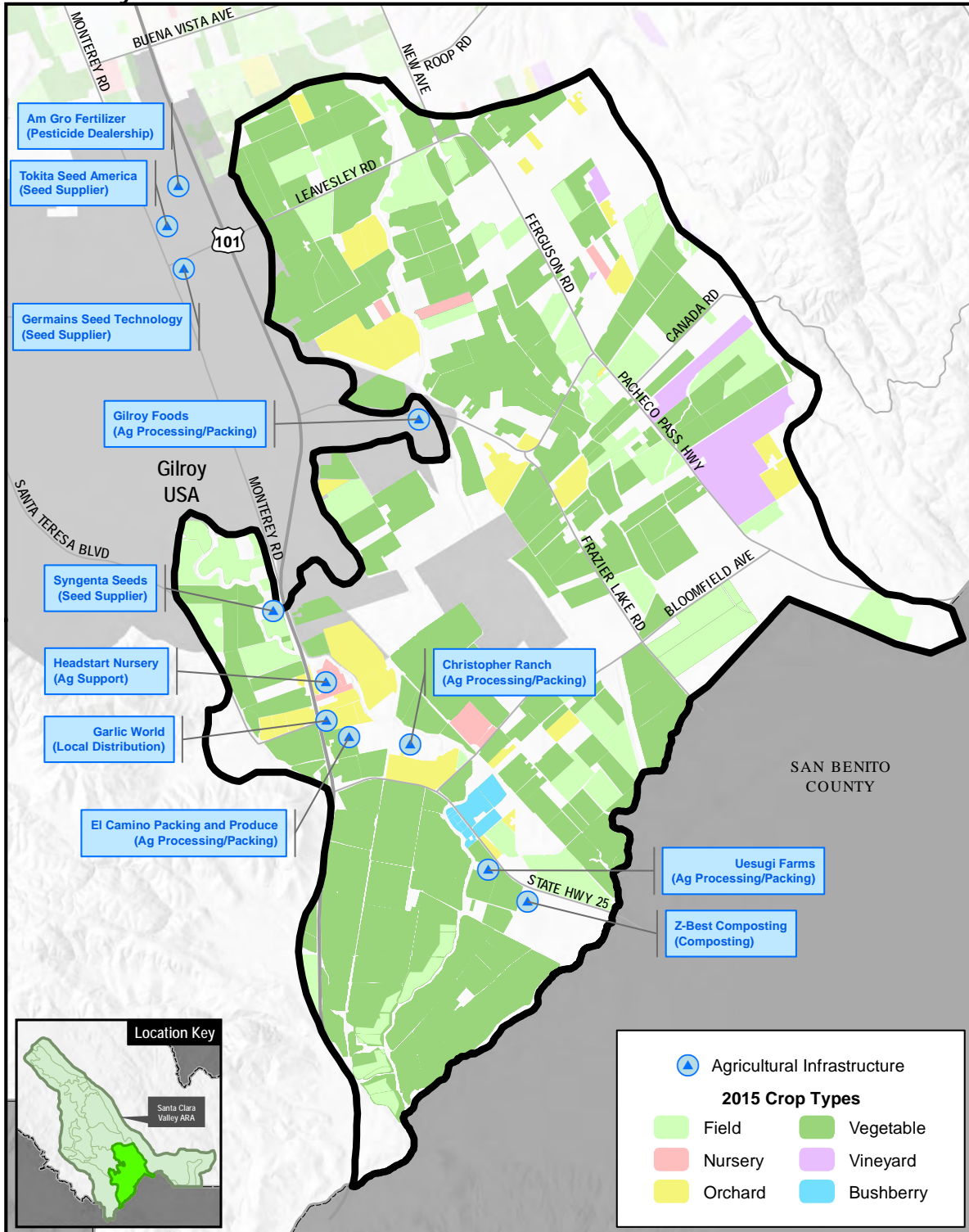
San Martin/Tennant Sub-Area



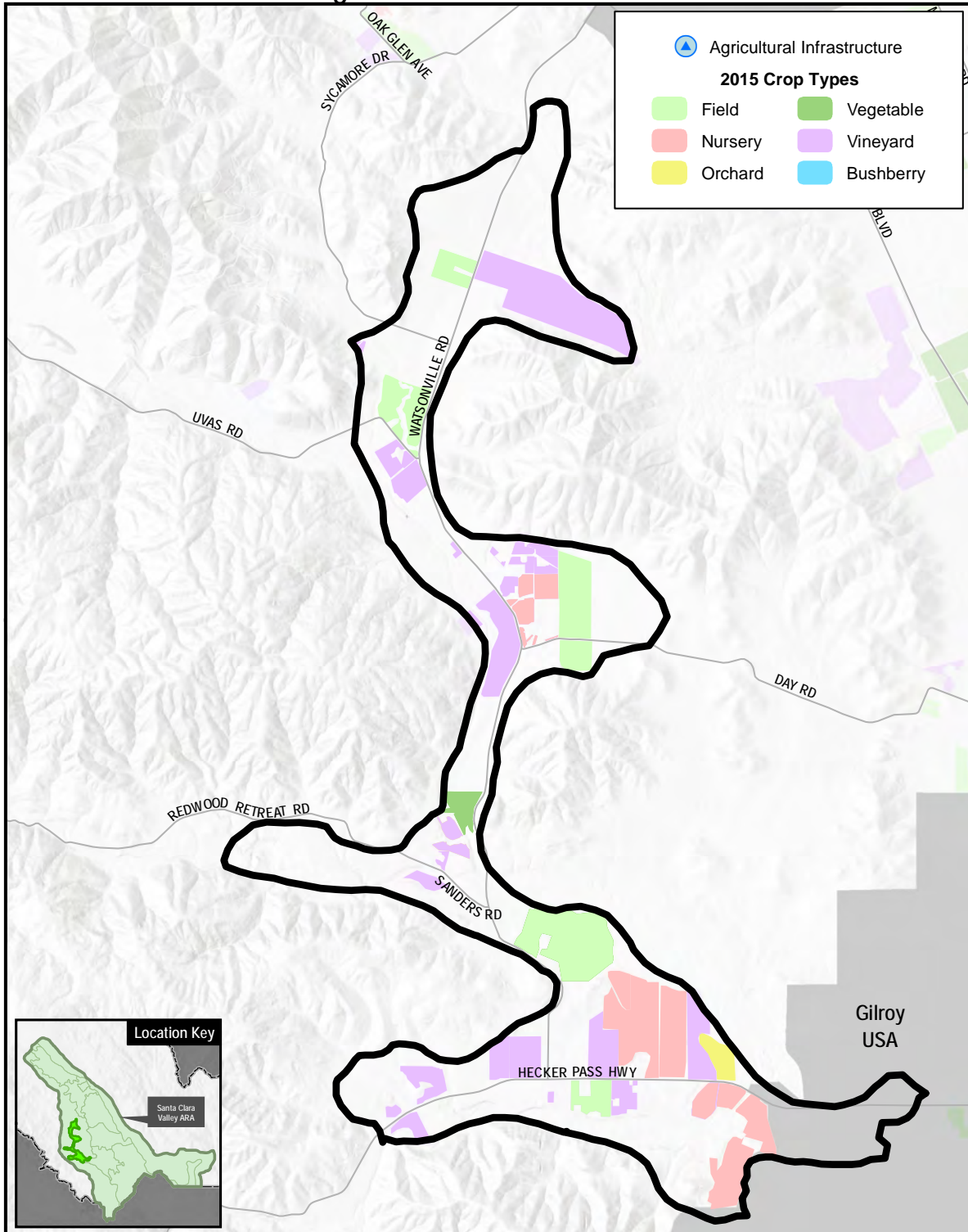
Buena Vista Sub-Area



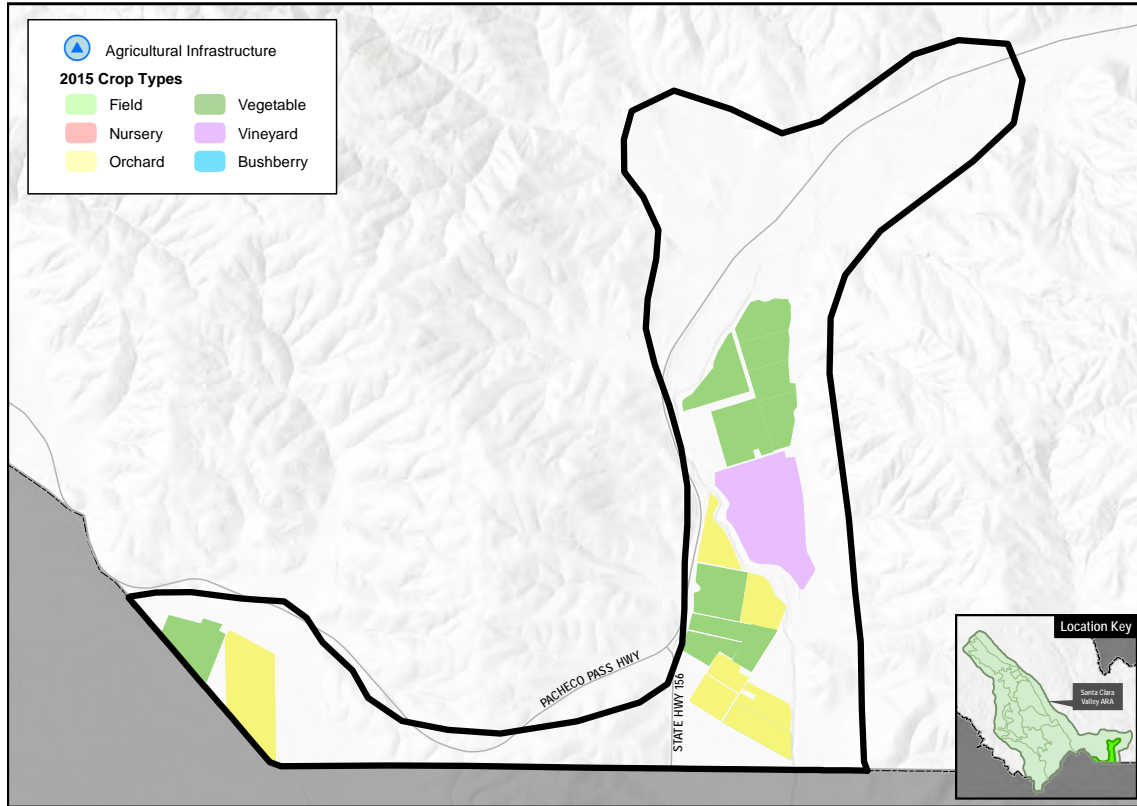
## Leavesley Sub-Area



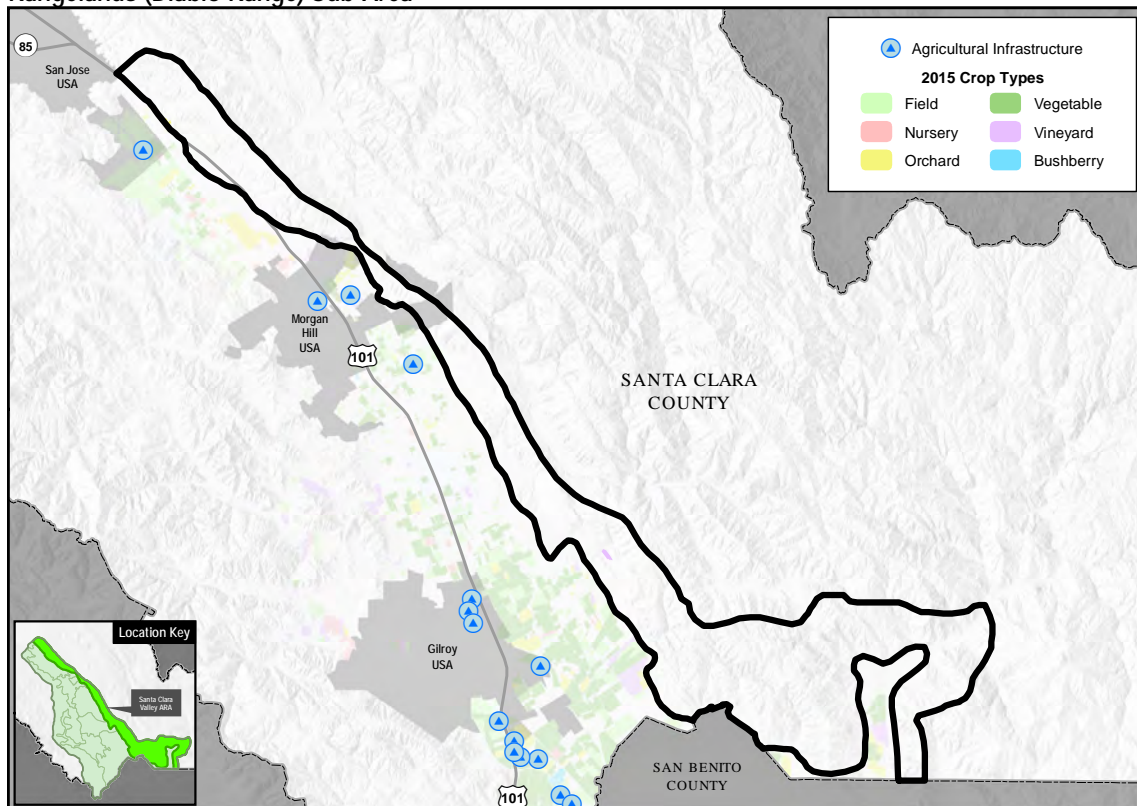
### Watsonville Road Wine Region Sub-Area



Pacheco Pass Sub-Area



Rangelands (Diablo Range) Sub-Area



### Rangelands (Santa Cruz Mountains) Sub-Area

