A CASE STUDY OF THE URBAN-EDGE

Sunol Water Temple Agricultural Park

A model for collaborative beginning farming integrated with public education and natural resources stewardship

Sunol AgPark

PRODUCED BY Sustainable Agriculture Education (SAGE)

IN PARTNERSHIP WITH San Francisco Public Utilities Commission (SFPUC)

> WITH SUPPORT FROM USDA Beginning Farmer and Rancher Program

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Executive Summary

nall-scale beginning farmers face myriad Challenges in establishing viable farm enterprises, especially near metropolitan areas. They can feel isolated and often struggle to survive in an environment of competitive markets, hardto-obtain start-up capital, insufficient technical assistance, rising input costs and increasing regulation. Proximity to nearby urban areas can bring additional challenges including speculative land prices well beyond agricultural production value, land-use conflicts and the 'impermanence syndrome' of agriculture on the edge. Farming on the urban edge also has advantages, including access to markets and accessibility by urban residents who are increasingly eager to connect with the places where their food comes from and the people who produce it.

The urban-edge Agricultural Park, or AgPark, aims to address some of the challenges of starting a small farm at the urban edge, while optimizing some of the opportunities of being close to urban areas. Urban-edge Agricultural Parks (AgParks) are an innovative, scalable model that facilitates land access, technical assistance and shared resources for multiple beginning farmers, and also provide fresh food and educational opportunities for nearby communities.

The AgPark concept stems from the nexus of three simple ideas: (1) to thrive, new farmers need support, including technical assistance, financial support and an engaged public; (2) 'learning hubs' such as the AgPark can attract capital investment and facilitate provision of technical assistance, both needed by new farms; and (3) the most critical place to engage the public and to create common ground between urban and rural interests is in the interface between the two, on available land at the urban edge. In short, AgParks are defined as multifunctional places that integrate collaborative sustainable farming, public education and natural resource stewardship and that link farmers and nearby communities for their mutual benefit.

The Purpose of this Case Study

This case study is designed as an informationsharing tool to help farmers and ranchers, nonprofit and community organizations, government agencies and other entities interested in participating in, starting, managing, supporting and/or hosting urban-edge AgParks. It is also intended to inform broader audiences interested in supporting small scale beginning farming and in revitalizing urban-edge agriculture.

In this case study, Sustainable Agriculture Education (SAGE), a nonprofit organization, tells the story of planning, launching and managing the Sunol Water Temple Agricultural Park (Sunol AgPark). SAGE distills lessons learned over nearly a decade of on-the-ground experience at the Sunol AgPark and many more years developing the Ag-Park concept.

Audiences

This book is intended to serve four sets of audiences who have various interests in wanting to understand the AgPark model. These audiences include:

- Beginning farmers, as well as those who serve them, who want to assess potential participation in an AgPark, or creation of an AgPark
- Nonprofit, public interest organizations and other entities, who want to assess potential management of an AgPark
- Public and private landowners who want to assess potential development of an AgPark on their land
- Others, including local community groups, government agencies, schools, educators and public education organizations, members of the local, organic and sustainable food movements, and members of the environmental movement, who want to assess engagement with and support for AgParks.

Structure

This book is organized into chapters directed at the main audience segments with the goal that the information contained is easy to access. While organizers and others will likely find the whole of the case study illuminating, the following chapters are written to inform the following specific audiences:

Chapter Two: The SAGE Perspective – for organizing entities, nonprofit and community organizations, government agencies, educators, and food movement and environmental organizers

Chapter Three: The Farmer Perspective – for beginning farmers and ranchers and those who serve them

Chapter Four: The Landowner Perspective, which in this case is the San Francisco Public Utilities Commission (SFPUC) – for public and private landowners

Funders of this Book

Production of this case study was primarily supported by a USDA Beginning Farmer and Rancher Grant (#2011-49400-30641), with additional support from the San Francisco Public Utilities Commission (SFPUC) education grant to SAGE and from SAGE general funds.

Summary by Chapter

This section summarizes information covered in each chapter of the case study, and, when applicable, key findings.

Chapter One: Introduction

Chapter One introduces the AgPark concept and the historical models and contemporary frameworks from which it has developed. The chapter begins zoomed in to tell the story of the on-theground model of the AgPark concept: the Sunol Water Temple Agricultural Park. This section describes the Sunol AgPark, including its currentday scope, its background and history, the key partners involved in creating it, especially the primary partnership between the SFPUC and SAGE, underlying physical conditions of the site, and the vision and goals that the AgPark was established to fulfill.

The chapter then broadens out to describe the background and historical context behind the AgPark concept and the relationship of AgParks to other farming models such as incubator farms, farming collectives and learning hubs.

Chapter Two: The SAGE Perspective

Chapter Two, the SAGE Perspective, covers the nuts and bolts of how SAGE has managed the AgPark from 2006 to the current time, summer 2014. The Chapter has seven sections: Getting Started, which includes the development of the Sunol AgPark Management Plan; Operations and Management; Farming – the Core Program Area; Natural Resource Stewardship – the Farm-Nature Connection; Public Education and Engagement – Fostering Stewardship; Financial Overview; and Lessons Learned.

Key Findings

The process of launching, implementing and managing the Sunol AgPark has brought both successes and challenges.

Overall, SAGE sees the AgPark as a great success. As envisioned, the Sunol AgPark has become

"An entity that integrates sustainable agriculture, natural resource stewardship, and public education about the agricultural, natural, and cultural resources of the Sunol Valley."

Furthermore, the Sunol AgPark has shown the basic AgPark model – based on land access for multiple farmers combined with public education and natural resources stewardship – to be adaptable and dynamic.

Findings showing notable successes include:

- The Sunol AgPark has continuously supported beginning farmers' operations since its inception, while becoming an important educational and local food resource for nearby communities.
- The Sunol AgPark farmers truly reflect the diversity of the East Bay urban community (in fact to a far greater extent than do the larger, more established farmers in Alameda County). In turn, the diversity of the farmers and the array of specialty and ethnic crops they grow have attracted a broad audience to engage with the Ag-Park through visits and buying farmers' produce.
- The success of the individual farmers is interdependent with the success of the AgPark overall. SAGE continues to strive to support the success of each farmer tenant, while managing the overall AgPark consistent with the long-term vision and principles.
- As shown by the summary of accomplishments in the education section, the education programs have successfully engaged a broad and diverse audience, with a focus on school groups from low-income communities.
- Public outreach programming and events have reached a large and diverse cross-section of the local community.

Lessons learned from key challenges include:

- The most significant challenge is intrinsic to the model and is the 'flip' side of the successes of fostering both farming and educational activities. Integrating the two main functions of the AgPark incubator/starter farm and agro-ecology educational program is an ongoing challenge, especially in terms of staffing, funding and coordination.
- Like many beginning farmers, AgPark farmers have experienced first-hand that small-scale

beginning farming is a high-risk, low-return proposition. Even with the provision of technical assistance for business planning, production and marketing, SAGE has not been able to ensure that farmers become, as had been hoped, truly 'profitable small farming enterprises.'

- SAGE has also found that economic viability is somewhat subjective. Farmers who are trying to make their livelihood from farms of just a few acres, need to get all elements right: sound planning for high-value crops, assured markets, skillful and timely production methods, appropriate equipment or access to leased equipment/ tractor services, sufficient cash flow for income fluctuations, and trained and committed labor. This is asking a lot. Farmers who want to make their small acreage farm a supplemental income or a 'learning farm' still need to generate at least enough income to justify the effort.
- The AgPark model aims to inculcate a spirit of cooperation among the farmer tenants. This has happened to some extent at the Sunol AgPark, but to a lesser extent than anticipated.
- Technical assistance has been a more critically important and complicated element of the overall project than was initially imagined because farmers have had less experience and/or mentorship than was initially assumed.
- Developing a sustainable education program dependent on variable external funding is challenging in terms of the lead organization's staff capacity and planning, and steady growth of school partners, among other factors.

Chapter Three: The Farmer Perspective

Chapter Three describes the farmers and farm operations, past and present, of the Sunol AgPark, and provides an overview of the farmers' experiences and lessons learned. Profiles are provided for the AgPark's current tenants, with long profiles for the multi-year anchor tenants and shorter profiles for farmer tenants who started farming at the AgPark in 2014. Profiles are also provided for past AgPark tenants, with long profiles for two long-term past tenants and a short profile for a former small-scale operation. A short section for future AgPark farmers was added in this publication's final stages, to reflect the farmer tenancy transitions that started occurring near the end of 2014 and will take place in the beginning of 2015. A summary of the key benefits and challenges of farming at the AgPark is also presented.

The AgPark is a living model entering its tenth year; the last section of the Farmer Perspective Chapter highlights some of the future aspirations of the current farmers. Taken together, these stories are shared with the hope that they may inform other farmers who are considering entering into an arrangement similar to the Sunol AgPark.

Key Findings

All of the current farmers, including one who has been at the AgPark since its inception, express strong support for the AgPark model and current management. Twelve farming groups have leased land at the Sunol AgPark since its beginning, and eight groups are currently farming there. While the diversity of the AgPark's farms and farming operations has presented different challenges and opportunities over the years, a number of shared perspectives about farming at the AgPark have emerged since the project's inception.

Clearly, farming at the Sunol AgPark has certain benefits that are recognized by former and current farmers. Many of these benefits were built into the model, such as access to land, capitalized infrastructure, reliable and affordable water and technical assistance. Other benefits have emerged as a byproduct of collaboration between the farmers and between farmers and SAGE. These include: access to new markets and networks facilitated by SAGE and opportunities to participate in educational programming at the AgPark.

AgPark farmers also cite many challenges. In addition to those faced by many small-scale farmers, the Sunol AgPark farmers have identified a number of other challenges that come with farming at the AgPark. These challenges relate to production issues and management considerations inherent in a collaborative, multi-functional endeavor.

It is also important to note that some of the challenges that were experienced by the first AgPark farmers were resolved after a few years, once the site and farming infrastructure were mostly developed.

Financial sustainability is a challenge cited by nearly every farmer. However, this is an issue that relates more broadly to the profession - and to beginning farmers in particular - than to the particulars of farming at the AgPark. Starting a farming business is not easy.

Four new farming enterprises started at the Sunol AgPark in 2014, joining two long-running enterprises, and two enterprises which began in 2012 and 2013, respectively. As this new community of farmers jells and the individual farming enterprises mature, the Sunol AgPark farmers are looking forward to improving their collaboration, both in terms of developing new marketing opportunities and tackling internal management challenges.

In summary, the Sunol AgPark farmers are passionate, committed and hard-working entrepreneurs, who each come to farming at the AgPark with different motivations and experiences. All of the farmers have been farming for less than ten years, and most of them are still considered beginning farmers. The AgPark model provides valuable access to land and resources that can help farmers get a foothold in the field; although the model clearly cannot address all of the profitability challenges that most beginning farmers face. Overall, AgPark farmers concur that farming alongside other farmers, with a rich overlay of public engagement programs, has multiple benefits that outweigh the contraints.

Chapter Four: The SFPUC Landowner Perspective

This chapter covers background about the SF-PUC, chronicles the agency's role in the development of the Sunol AgPark from its inception, and includes an overview assessment of its experience as the AgPark landowner. The SFPUC is the partner that allowed the concept of an AgPark to become realized as the Sunol Water Temple AgPark.

The issuance of a lease to SAGE to develop and operate the AgPark was in keeping with the SF-PUC's Water Enterprise Environmental Stewardship Policy, which includes protection and restoration of watersheds lands and public education about the critical importance of the regional water supply system and watershed and rights-of-way lands. The support of the fledging AgPark, as a farm and education venue, was also an important early investment in the SFPUC's Watershed and Environmental Stewardship Program. It is an investment the SFPUC's Natural Resources and Lands Management Division staff deems as most worthwhile.

Key Findings

The SFPUC reports that its goals and expectations for the Sunol AgPark have been largely met. The main goal for the SFPUC was that SAGE would educate the public about the agricultural history of the valley, the Alameda Creek watershed and natural resources issues.

The SFPUC has benefited from the positive public relations that have resulted from its support for SAGE's Farming in the Watershed education programs at the AgPark and in schools, as well as the goodwill that has come from the myriad opportunities for the public to engage in AgPark events, field days and volunteer activities. However, the SFPUC notes that, in the articles that are regularly written about AgPark farmers, the SFPUC is not always acknowledged as a key partner.

A notable success factor for the SFPUC is the significant enhancement of natural resources on the site. The soil, which was compacted and depleted when the AgPark started, is now permeable, friable and rich with microbial life. The native habitat hedgerows, diverse organic cropping systems, and habitat structures such as bluebird boxes and raptor perches, have increased the biodiversity of the site.

Not all aspects of developing and managing an AgPark with SAGE have always come together smoothly. These include the fact that the lease with SAGE for the Sunol AgPark is unique for the SFPUC, meaning that some issues had to be negotiated and resolved on a case-by-case basis and that other lease precedents did not always fit. At times, the partnership has been hampered by the needs of SAGE and the farmers for quicker responses to issues than a bureaucracy the size of the SFPUC can easily deliver. The SFPUC has also at times been frustrated by the farmers' lack of strict adherence to lease requirements, such as keeping the access gate locked after public hours.

Overall, the partnership with SAGE has been positive for the SFPUC. The Sunol AgPark education programs provide a preview and bridge to the array of education offerings that will be provided by the Alameda Creek Watershed Center, which the SFPUC will open in 2017 next to the Water Temple.

Conclusion

At the urban edge, where the challenges of keeping agriculture viable and addressing complex sustainability issues, an AgPark provides an onthe-ground set of solutions, one grounded in a real and specific place where new farmers can get established and nearby urban residents have many opportunities for engagement. The AgPark posits certain tenets: that new farmers need technical assistance and financial support to get started; that a collaborative model can facilitate such support; that food should be produced locally and sustainably; that preserving farming and farmland near cities is critically important; that people should have relationships with the farmers who produce their food; that farms and critical natural resources should coexist; that the public should be and wants to be engaged in natural resources stewardship, including on farms; and that communities should be connected with their nearby farms. These principles are neither simple to prove in concept, nor easy to put into practice in real life.

Creating and managing an AgPark is complex and challenging, but the process of taking it on is in itself a reward. Everyone involved has learned from addressing, through planning and implementation phases, the ongoing issues of how to support new farmers and help them establish viable businesses; how to make on-farm education meaningful and effective; and how to best integrate farming, resource stewardship and education activities.

The many different ways in which the issues present themselves is part of the challenge, just as the multi-functionality from which these 'juggling acts' often arise is what makes the AgPark such a rich, compelling and connected place. In some ways, the AgPark is a microcosm for urban-rural linkages and epitomizes, on this modest site, the complexities of balancing agriculture, cities and nature in resilient metropolitan regions.

SAGE and partners have endeavored to make this case study an accurate and honest portrayal of the process of incubating, launching and managing this on-the-ground model of the AgPark concept – the Sunol AgPark. This book was written with the hope that the case study and the lessons it imparts will educate would-be AgPark organizers and participants, providing tools, frameworks,

sample documents, and hopefully even a dash of inspiration to create these special agricultural places near cities. Sustaining cities and sustaining their regional agriculture must be part of a common effort in order to create livable, resilient communities where both human and natural systems can thrive.

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Many people contributed to the Sunol AgPark Case Study. The publication was conceived and its production was managed by Sibella Kraus, SAGE President. Noreen Rei Fukumori, communication alchemist and long-time graphic design partner with SAGE, designed the cover, title page and book layout. Rebecca Brams, SAGE Communications and Development Consultant, and Sibella were the primary writers and editors. Cynthia King, former Sunol AgPark Site and Education Program Manager, and Charlotte Hryse, SAGE Program Associate, wrote the Farmer Perspective Chapter with plentiful input from the farmers, and helped with editing. Carla Schultheis, Watershed and Environmental Improvement Program Manager for the Natural Resources and Lands Management Division, Water Enterprise, SFPUC, was the main informant for the SFPUC Landowner Perspective Chapter. Ayano Jeffers-Fabro, SAGE Administrative Assistant, formatted the book. The whole Sunol AgPark enterprise owes a debt of gratitude to the farmers, educators, agricultural and education consultants, organizational partners, SAGE staff, and not the least, the funders, who have helped to realize the vision for this project over the last decade.

Introduction



Urban-edge Agricultural Parks (AgParks) are an innovative, scalable model that facilitates land access and technical assistance for multiple beginning farmers, and also provide fresh food and educational opportunities for nearby communities. This chapter introduces the AgPark concept, historical models and contemporary frameworks from which it has developed.

The chapter begins zoomed in to tell the story of the on-the-ground model of the AgPark concept: the Sunol Water Temple Agricultural Park (Sunol AgPark). From there, it broadens out to describe the background behind the AgPark concept and related farming models such as incubator farms, farming collectives and learning hubs.

Background on Sunol AgPark

This section describes the Sunol AgPark, including its current-day scope, its background and history, the key partners involved in creating it, underlying physical conditions of the site, and the vision and goals that the AgPark was established to fulfill.

The Sunol AgPark Today

The Sunol AgPark is located close to densely populated parts of the San Francisco Bay Area.

It is only 20 miles north of San Jose, the region's largest city, 13 miles east of Fremont, 10 miles south of Pleasanton, and a 30-minute drive from Oakland. However, the rural Sunol Valley and its town of less than 1,000 people feel a world away from the hubbub of urban life. The Sunol AgPark is tucked at the edge of this scenic valley. It is named for the adjacent Sunol Water Temple, a landmark beaux arts structure which was designed by famed architect Willis Polk in 1910 to honor the water resources that then supported San Francisco and Oakland. With the Water Temple's 60-foot columns rising gracefully in the background, Western Bluebirds cruise the AgPark farm fields for insects, while birds of prey hover on thermals above the oak-dotted hills. Honeybees buzz through the native plant hedgerows, and butterflies alight on blooms. Alongside the farmlands run the Alameda and Arroyo de Laguna Creeks, lush with riparian habitat and shaded by sycamores.

The Sunol AgPark was designed as a model of urban-edge, multi-functional agriculture – agriculture that provides not only food but many other benefits as well, such as protecting water quality and ecosystem services, connecting urban communities and schools with their food sources, providing land access for new, immigrant and scaling-up farmers, and protecting greenbelt open space while opening up opportunities for community members to enjoy it.

Today, the 20-acre Sunol AgPark truly serves this purpose. A collaboration of working organic farms, a learning hub for beginning and scalingup farmers, a hands-on education program site for more than 2,000 schoolchildren a year, home to an extensive native plant hedgerow, and a center for public engagement with local agriculture, the AgPark is a beautiful, dynamic and connected place.

The AgPark today would be nearly unrecognizable to a visitor from 2006, who would have seen in this same place a dry-farmed hay field. The path to creating a vibrant and truly multi-functional AgPark has not always been straightforward. This case study discusses the process of developing the AgPark, including the twists and turns encountered along the way. It was written in hopes that others can gain from the lessons Sustainable Agriculture Education (SAGE), the AgPark farmers and AgPark partners have learned, and that readers will apply these lessons to creating their own AgParks or special agricultural places.

SFPUC and SAGE Partnership

The Sunol AgPark is situated on 20 acres of watershed land owned by the San Francisco Public Utilities Commission (SFPUC). (It was originally established on 18 acres, with two additional acres of orchard added in 2011.) The Sunol AgPark was created in early 2006 as a partnership between the SFPUC and SAGE, a nonprofit organization.

The SFPUC is the agency of the City and County of San Francisco that provides water, power, and wastewater services to San Francisco, and also supplies water to an additional 1.6 million residents of three other Bay Area counties.

The Sunol AgPark site is located within the extensive 600-square-mile (384,000-acre) Alameda Creek watershed and within the 40,000-acre area of this watershed that is owned by the SFPUC. The AgPark is located between the historic Sunol Water Temple and the corporation yard used by the SFPUC for its Alameda Creek watershed



Sunol AgPark, Aerial View

maintenance and operations functions. Nearby are additional SFPUC lands leased for gravel extraction, ranching and commercial nurseries.

SAGE is a nonprofit organization founded in 2001 and based in Berkeley, California. Its mission is to cultivate urban-edge places where farming and local food culture can thrive and be celebrated. Through innovative urban-rural linkage projects, SAGE regenerates agricultural places that define and sustain cities in the San Francisco Bay Area and beyond. As a lean, entrepreneurial organization, SAGE collaborates with partners including public agencies, farmers, educators, conservationists, health experts, economists, planners, public interest organizations, and community groups in urban and rural areas.

A major focus of SAGE has been the development of a working model for urban-edge Agricultural Parks or AgParks. SAGE articulated the background and rationale for this model in its 2005 publications, *Urban-Edge Agricultural Parks Feasibility Study* and *Urban-Edge Agricultural Parks Toolkit*.

In addition to managing the Sunol AgPark project, SAGE conducts studies and publishes reports to promote understanding of AgParks, participates in public forums and conferences, and helps develop AgParks on public and private land throughout California.

SAGE's involvement in AgPark development is supported by the background of its President, Sibella Kraus, who has decades of experience with promoting regional agriculture and sustainable agriculture education. Prior to founding SAGE, Sibella was the founding Director of the Center for Urban Education about Sustainable Agriculture (CUESA) and created the acclaimed San Francisco Ferry Plaza Farmers' Market. Under her direction, from 1993-2000, CUESA developed highly praised education programs at the market, in schools and in the community. Before CUE-SA, Sibella developed an organic and specialty produce division for a wholesale produce business.

Additional Key Partners

The primary partnership between the SFPUC and SAGE on the Sunol AgPark has been supported by close collaboration with additional key organizations. These include the Agriculture and Land-Based Training Association (ALBA) and the Alameda County Resource Conservation District (ACRCD). ALBA staff partnered with



Students gathered around Water Temple (2010)

SAGE in the development of the AgPark concept and provided advice throughout the development of the Sunol AgPark. The ACRCD has advised on the natural resources stewardship elements of the Sunol AgPark since its inception and has also been an important education program partner.

History of the Sunol AgPark's Development

Sibella Kraus, SAGE President, first learned about the Sunol Water Temple site in 1996, when she presented the Food and Agriculture Chapter of the San Francisco Sustainability Plan at a public meeting. Sunol residents present at this meeting requested that the Sustainability Plan also cover lands owned by San Francisco outside the City boundary, including the Sunol Valley watershed lands owned by the City.

Almost a decade later, when SAGE and the Ag-Park team were studying the urban-edge Agricultural Parks concept, the Sunol site came to mind. In May 2005, the SFPUC agreed to allow SAGE to produce a preliminary case study for a Sunol

Land Use History

Sunol AgPark Management Plan, 2008

Historically, the region around the Sunol Valley supported various types of native grasslands, chaparral and other scrub habitats, oak woodlands and riparian woodlands. Intensive agriculture developed in the Sunol Valley in the early 1900s when the lands around the Water Temple were planted with walnut orchards. Buildings that served as a hulling shed and processing plant for walnut production are now part of the SFPUC corporation yard, and used for equipment storage. Specialty crops, including strawberries, chives, and specialty lettuce, were grown from the mid-1900s to the late 1980s. For several decades before the Sunol AgPark was created, hay production was the primary farming use of the site.

Today, the landscape around the AgPark is primarily dominated by agricultural land uses such as cattle ranching, as well as gravel mining and commercial nursery operations. Recreation draws visitors to the Sunol area to enjoy the 15,000-acre Sunol Regional Ohlone Wilderness Park and other nearby parks operated by the East Bay Regional Park District.

AgPark as part of the Urban-Edge Agricultural Parks Feasibility Study. The case study for a Sunol AgPark was not ultimately included in the published Feasibility Study.

However, the preliminary case study laid the groundwork for a Preliminary Feasibility Study for the Sunol Agricultural Park, which SAGE presented to the SFPUC in October 2005. A letter of support from the SFPUC, in November 2005, and the issuance of a 90-day Permit (later extended to a month-to-month Revocable Permit) on January 20, 2006, helped SAGE leverage critical project funding from the Columbia Foundation.

In March 2007, SAGE entered into a nine-year Master Lease with the SFPUC for further development and operation of the Sunol AgPark. The lease's detailed terms and conditions include a provision for SAGE to enter into subleases, called Licenses with farmer tenants.

Initial primary funders of the Sunol AgPark were the Columbia Foundation and the USDA Risk Management Agency Community Outreach and Assistance Partnership Program (USDA RMA). The SFPUC provided generous support towards the production of a comprehensive Management Plan and towards the establishment of basic infrastructure. Additional initial funders included the San Francisco Foundation and contributions from individuals.

In 2006, three farmers began farming activities at the Sunol AgPark. By 2008, all land was being farmed. From 2008 through current operations in 2014, the Sunol AgPark has been home to over a dozen small farming enterprises. (See Chapter Three of this document for in-depth information about farmers and farming operations at the Sunol AgPark.)

In March 2008, SAGE published the Sunol Water Temple Agricultural Park Management Plan (Management Plan). Its purpose was to provide a sound management, operations and financial framework to guide the fulfillment of the Sunol AgPark vision, goals and objectives. The Management Plan outlined the rationale and strategies for phased development of the AgPark entity over the nine-year term of the lease agreement. An additional purpose of the plan was to provide, for all participants, a comprehensive overview of the project and a development 'roadmap' so that everyone involved could understand the goals of the project and work together to achieve their realization.

Following strategies articulated in the Management Plan, SAGE has supported the success of farmers and farming operations at the Sunol Ag-Park, developed farming infrastructure, fostered sustainable farming practices, created and implemented a robust public education and engagement program, and protected and enhanced natural resources at the site. Further sections of this case study detail the progress made, as well as challenges faced and lessons learned, in implementing the Management Plan.

Current Status and Future Considerations

The upcoming expiration of the lease presents opportunities for all partners to assess their roles and responsibilities and to create a plan for the AgPark's next ten years. Scheduled to open in 2017 adjacent to the Water Temple, the SFPUC's Alameda Creek Watershed Center, being planned



Students exploring watersheds through raised releif maps (2010)

Streamside or Riparian Habitat

Sunol AgPark Management Plan, 2008

There is a wide band of existing riparian vegetation on the east bank of the Arroyo de Laguna just west of the AgPark fence. The width of the bank varies from 75-120 feet as the creek bends toward the west in the vicinity of the confluence with Alameda Creek downstream of the AgPark. The banks of the Arroyo are densely vegetated with groundcover, shrubs, vines and an overstory of trees. This riparian plant community is part of the largest intact stand of Sycamore-Alluvial Woodland in the Alameda Creek Watershed and is an important interface between aquatic and terrestrial communities (Alameda Watershed Habitat Conservation Plan - AWHCP, 2006). The riparian corridor is situated outside, but immediately adjacent to, the AgPark property and is undisturbed except for the SFPUC graveled service road that parallels the top of the bank on the west side of the AgPark.

Soil Profile

Sunol AgPark Management Plan, 2008

According to the soil survey (USGS Soil Survey Alameda Area) completed in 1966, the soils of the AgPark are classified as Yolo Loam (YmA). It is a Class I soil that is among the most productive agricultural soils in the world. It is a well-drained soil with moderate permeability, meaning that the soil is suitable for crops using irrigation. The effective rooting depth is 60 inches or more with a high water holding capacity of 10 to 12 inches. As a result of its moderate permeability and gentle slope (0 - 3%), runoff is slow, with little chance of erosion from cultivation.



Vision and Guiding Principles of the Sunol AgPark

Sunol AgPark Management Plan, 2008

- Vision: The Sunol AgPark is an entity that integrates sustainable agriculture, natural resource stewardship, and public education about the agricultural, natural, and cultural resources of the Sunol Valley.
- Guiding Principles: Management of the Sunol AgPark strives to integrate the three primary elements of the Vision – Community Benefit Farming, Natural Resource Stewardship, and Public Education – through the following guiding principles:

• Land access and farming opportunities for multiple small-scale farmers whose production, marketing and education activities support local food systems

• Protection and enhancement of the natural resources of land, water, and habitat on the site and, as feasible, in the environs

• Experiential learning opportunities for multiple audiences related to the farming operations, Alameda Creek watershed, local ecology, and the agricultural and cultural history of the area

• Management of the AgPark as a collaborative, sustainable system that is economically viable, ecologically sound, and provides value for all participants – the farmers, the Sunol community, the SFPUC and SAGE, collaborators, and Bay Area residents

• Demonstration of the feasibility of the AgPark concept by creating a working model

• While farming, resource stewardship, and public education are all important elements, the agricultural operation serves as the organizing element and focus.

as an extensive regional educational facility, will greatly expand the potential for public engagement with the AgPark.

SAGE's AgPark Work

This section describes the development of the conceptual models and frameworks that led up to the establishment of the Sunol AgPark. It summarizes SAGE's work in developing the feasibility of and need for this on-the-ground model of an urbanedge AgPark.

Development of the AgPark Concept

SAGE pioneered the concept of urban-edge Agricultural Parks (AgParks) in the U.S., based in part on European models. SAGE conceives of such AgParks as a strategy to foster shared urban-rural values of sense of place, culture and health, and to promote the convergent interests of small-scale farmers seeking a viable living and urban residents seeking a healthier life. AgParks are an innovative, scalable model that facilitates land access, technical assistance, capitalized infrastructure and opportunities for collaboration for multiple beginning and immigrant farmers and scaling-up urban gardeners. AgParks also provide fresh food, public education, internships and myriad opportunities to engage in local farming for nearby urban, suburban and peri-urban communities. In short, Ag-Parks are multi-functional places that link farmers and urban residents for their mutual benefit.

In January 2005, SAGE and partners Bay Area Economics (BAE) and the Agriculture and Land-Based Training Association (ALBA) produced the Urban-Edge Agricultural Parks Feasibility Study (Feasibility Study). Funded with grants from the USDA Risk Management Agency, this two-phase study explored AgParks as an approach to help reframe the urban-rural interface from battleground into common ground.

The Feasibility Study analyzed various types of agricultural preservation models that have been used both domestically and internationally. In addition, the study investigated funding sources, farmer demand, and potential AgPark sites in the Bay Area. It also produced preliminary concepts for two specific sites, both owned by regional park districts. The findings of the study significantly influenced the development of the Sunol AgPark, other AgParks on public and private land, and the AgPark concept in general.

In December 2005, SAGE and partners published the Urban-Edge Agricultural Parks Toolkit (Toolkit), which introduces the components of the Ag-Park model in six units: introduction; primer on



Sunol Water Temple and surrounding land prior to development of the AgPark (2005)

small-scale agriculture; agriculture program; park program; design principles; and financial overview. Each unit builds upon the previous one in a logical sequence and is intended to guide agencies in assessing the applicability of the AgPark model and undertaking preliminary planning.

To foster the creation of AgParks on both public and private lands, SAGE provides conceptualization, planning and implementation services. In addition to the Sunol Water Temple AgPark, SAGE has also advised or helped develop the following:

Coyote Valley Agricultural Resource Area: In 2012, SAGE produced the *Sustaining Agriculture and Conservation in the Coyote Valley Feasibility Study*, a two year multi-stakeholder effort which assessed the potential for creating a regionally-significant sustainable agriculture resource area within the Coyote Valley, a 7,500-acre area of prime farmland that had, until recently, been slated for development. Funded by the California Coastal Conservancy, the Study investigated existing conditions and concluded that it is feasible to sustain agriculture and conservation in the Coyote Valley,



Sustaining Agriculture and Conservation in the Coyote Valley Feasibility Study (2012)

provided stakeholders take significant, strategic action.

Through its current *Revitalizing Specialty Crop Agriculture in the Coyote Valley* project, SAGE is working with key partners to begin implementation of the Study's long-term vision: "The Coyote Valley is home to a regionally significant agricultural resource area that contains important farmland and key habitat; supports livelihoods for its farmers, ranchers and agricultural employees; provides healthy food and a recreational amenity for Bay Area communities; and protects important ecological and cultural resources of the region."

Martial Cottle Park: SAGE provided agriculture and food systems consultation for a master plan for a 290-acre AgPark located in a San Jose residential area. Walter Cottle Lester donated a portion of his family's historic 290-acre Martial Cottle agricultural farm to the Santa Clara County Parks and Recreation Department, and sold an additional portion to the California State Parks. Terms of the deed require active agriculture as a major use of the land. Educational programs and passive recreation are complementary land uses. Martial Cottle Park opened to the public in 2012 with the farming component expected to be leased out by 2015.

Grant Road Farm: SAGE assisted in the development of a conceptual plan to preserve a five-acre farm, as a remnant of the last remaining farm in Mountain View, within a new residential development.

Ag Conservancy for Angwin Ecovillage: SAGE assisted in the development of a business plan for a 70-acre working farm as an integral part of the environmental, economic, and social sustainability of a proposed Ecovillage infill/expansion project in a small college town in Napa County.

Green Valley Agricultural Conservancy: SAGE provided consultation services on the agricultural component of the Specific Plan for Middle Green

Valley, a 2,000-acre plan area in Solano County. The Green Valley Agricultural Conservancy, for which SAGE developed a business plan, will celebrate and perpetuate the tradition of cherished working landscapes that have characterized this part of Solano County for over 150 years. The Conservancy is envisioned as both an agricultural operation, growing for the local community and regional foodshed, and as a land steward, responsible for managing conservation and agricultural easements. The 450-acre Green Valley Farm will be community amenity and defining element for the new cluster development project.

Oeste Farms Agricultural Conservancy: Oeste Ranch is a 600-acre parcel of land located in Yolo County, at the west end of the northern edge of the city of Davis. Formerly part of the historic, multi-generation farm holdings of the Oeste family, today the land is owned by Oeste Ranch Partners, LLC. The Partnership asked SAGE to conduct a feasibility study for an agricultural conservancy on up to 400 acres of the site with the aim of permanently preserving and enhancing the agricultural traditions and values of this prime farm land through smaller-scale farms using organic farming methods.

New Ruralism

Concurrent with developing the AgPark model, SAGE developed the concept of 'New Ruralism' to describe a new kind of thinking around urban edge land use and rural-urban relationships. SAGE defines New Ruralism as "the preservation and enhancement of urban-edge, rural agricultural areas as places that are indispensable to the economic, environmental, social and cultural vitality of cities and metropolitan regions".

In forums such as the 2006 publication *A Call for New Ruralism* (revised in 2013), SAGE articulated preliminary principles for a New Ruralism framework that bridges smart growth, new urbanism and sustainable food and agriculture systems. New Ruralism argues that preserving regional agriculture and developing healthy cities require the emergence of new rural-urban compacts based on mutual sustainability. New Ruralism posits that vital agricultural areas can and must help contain and sustain the cities they border.

Historical and Contemporary Models of Collective Farming

The AgPark concept is based on historic models of collective farming, developed over the last century and before, as well as modern collective farming models and case studies. This section describes various models – historical and contemporary – upon which the AgPark concept draws.

Historical Models

Throughout the course of humanity, there have been many different models of communal and collective agriculture. Several of the more enduring models are described below.

Allotment Systems

In Europe and Asia, allotment systems provide families with opportunities to grow their own food at the edges of cities and also provide those cities with a way to create a buffer for food security in times of crisis. An analogy can be drawn between this type of allotment, the victory gardens of wartime eras in the U.S., and the modern movement of urban agriculture, community gardens, food security and food sovereignty. Allotment gardens generally consist of a small piece of land, often approximately 200-400 square meters in size within a larger allotment area managed by a public entity or association. Japan has developed a significant allotment system, in response to demand from large urban populations and an intense competition for space. In Germany, small-scale farmers and gardeners formed associations (like cooperatives) to help manage their small plots. Allotment associations in some contexts have been shown to be an effective means for teaching and learning about democracy.

Ejidos

The Mexican Constitution of 1917 proclaimed that all land throughout Mexico would either be Ejido (communal) or owned by Mexican nationals. The Ejido land was given to every village in Mexico and could not be sold. The Ejido system of land tenure combines communal ownership with individual use. In most cases, the Ejido land is divided into separate family holdings that cannot be sold, but can be passed down to heirs. Cooperatively run Ejidos have shown positive economic results for some Mexican farmers over the last decade. Del Cabo Farms, in Baja Mexico, is an excellent example of how cooperatively run Ejidos can be economically viable and environmentally sustainable. The Ejido farmers of Del Cabo work collectively to market their produce on a much larger and more economically viable scale throughout the U.S. and Mexico. Today, Ejido land represents over 55% of cultivated land in Mexico.

Kibbutz

Kibbutz is the Hebrew word for 'communal settlement.' Kibbutzim represent a socioeconomic model based on the principles of joint ownership of property, equality and cooperation in production, consumption and education. The first kibbutzim were founded in the early 1900s on the land that would become the State of Israel. The kibbutz movement was founded on agriculture, and although kibbutzim now manufacture many different products, including metals, plastics and processed foods, agriculture remains a prominent source of income, as well as a way of life for kibbutzim and their members. Kibbutzim today continue to represent an important force in Israel, both economically and socially: 33% of the country's produce and 6.3% of its manufactured goods are produced on kibbutz, while only 2.5% of Israel's population lives on kibbutz.

Contemporary Models in the U.S.

Agricultural Cooperatives

An agricultural cooperative, also known as a farmers' co-op, is a cooperative where farmers pool their resources in certain areas of activity. A broad typology of agricultural cooperatives distinguishes between *agricultural service cooperatives*, which provide various services to their individually farming members, and *agricultural production cooperatives*, where production resources (land, machinery) are pooled and members farm jointly.

The default meaning of *agricultural cooperative* is usually an agricultural *service* cooperative, which is the numerically dominant form in the world. There are two primary types of agricultural service cooperatives, *supply cooperative* and *marketing cooperative*. Supply cooperatives supply their members with inputs for agricultural production, including seeds, fertilizers, fuel, and machinery services. Marketing cooperatives are established by farmers to undertake transportation, packaging, distribution, and marketing of farm products (both crop and livestock). Farmers also widely rely on credit cooperatives as a source of financing for both working capital and investments.



Farmer Fred Hempel and advisor Rex Dufour at Sunol Organic Training Field Day (2007)

In the U.S, agricultural cooperatives are present in nearly every stage of food and fiber production, and have been part of agriculture for more than a century. There are more than 4,000 agricultural cooperatives in the U.S., with a total net income of nearly \$2 billion and net business volume of more than \$89 billion.

Incubator Farms

A farm incubator project is a land-based multigrower project that provides training and technical assistance to aspiring and beginning farmers. According to The Farm Incubator Toolkit developed by the National Incubator Farm Training Initiative (NIFTI) and published by the New Entry Sustainable Farming Project, incubator farms are similar to traditional business incubators in their focus on farmers as entrepreneurs: "Farm incubator projects aim to help new and beginning farm entrepreneurs establish their own successful businesses by providing specific resources and services that are difficult for start-up entrepreneurs to access on their own. The types of resources and services offered by farm incubator projects vary depending on geographic area, demographics, funding, and other factors. However, the overall goal of farm incubator projects is consistent: to minimize the barrier to entry for aspiring and beginning farmers." While the farming element of AgParks has much in common with incubator farms in terms of goals and methods, one difference is that farmers in incubator farms are usually expected to move on after their initial training period on order to make way for other new farmers.

Single Landowner Renting to Tenant Farmers

A single landowner that rents land to multiple tenant farmers on the same property is a common arrangement. This type of arrangement has recently gained greater prominence in many rural communities across the U.S. as a way for limited resource and immigrant farmers to obtain access to agricultural land.

Conclusion

Farmers and ranchers are some of the most important stewards of natural resources; and they also contribute significantly to the economic vitality and livability of communities. At the edges of cities, farms and ranches provide multiple benefits - ecosystem services, habitat for native species and pollinators, recreation and open space - that sustain and contain nearby urban areas. Farmers and ranchers in the U.S. make up an aging population: the average age of agricultural producers is nearly 60. There is an urgent need to help attract and support the next generation of stewards and food producers. It is estimated that the U.S. will need approximately 100,000 such new farmers over the next five years to replace retiring farmers. There is also an urgent need to revitalize farming areas near cities.

AgParks and similar agricultural resource areas are an ideal setting to provide various types of support for beginning farmers and ranchers (BFR) as they enter the agricultural sector. The Sunol AgPark has served as an important venue for BFR trainings, as part of SAGE's USDA BFR project, *Cultivating a New Generation of Farmers at the Urban Edge*, a collaboration with the Alameda County Conservation Partnership. More broadly, the Sunol AgPark is a replicable, innovative urban-rural linkage project that creates common ground and fosters common cause between smallscale farmers and nearby consumers.

The SAGE Perspective



The Introduction gave an overview of why SAGE developed the Sunol AgPark and background about its creation. This chapter, the SAGE Perspective, covers the nuts and bolts of how SAGE has managed the AgPark from 2006 to the current time, summer 2014.

The Chapter has seven sections: Getting Started, which includes the development of the Sunol AgPark Management Plan; Operations and Management; Farming – the Core Program Area; Natural Resources Stewardship – the Farm-Nature Connection; Public Education and Engagement – Building a Constituency; Financials; and Assessment and Lessons Learned.

Getting Started

SAGE started the Sunol AgPark based on the AgPark concept described in the Introduction Chapter: the AgPark as a place that facilitates land access and technical assistance for multiple beginning farmers, as well as fresh food and an aesthetic, educational, recreational and environmental amenity for nearby communities. In actually developing and managing an AgPark, SAGE soon saw the differences between an abstract model and a working pilot.

As described in Chapter 4, that focuses on the

students harvesting Terra Bella produce (2012)

perspective of the landowner, the SFPUC, the first step in developing the Sunol AgPark was securing a permit from the SFPUC along with a commitment to develop a long-term lease. This enabled SAGE to leverage the funds needed for establishing the basic infrastructure of a perimeter fence and an irrigation system, and to solicit farmers. Timing was everything. In that first spring of 2006, SAGE had to secure permits and funding commitments and then make arrangements with fencing and irrigation contractors, all by June 1 at the latest, in order for any production to take place in that first growing season.

Staffing was also critical to a successful start. SAGE was fortunate to be able retain a seasoned organic farmer, who happened to be not managing a farm at the time, as the contract AgPark Farm Manager responsible for overseeing and undertaking many aspects of the AgPark startup. The AgPark also relied on the assistance of volunteers to help with some of the 'grunt work' such as putting in the irrigation mainlines and laying out the one-acre field plots. The Operations and Management section below includes more detail about staffing over time.

The basic vision, goals and principles for the AgPark were first articulated in memorandums

that were part of SAGE's initial discussions with the SFPUC. This framework of goals and principles was then incorporated and referenced in legal documents, the Renewable 90-Day Permit and the nineyear Lease Agreement, both of which are discussed in more detail in the SFPUC Perspective Chapter. The Farmer License Agreement template was an appendix to the Master Lease. This framework also served to guide SAGE's management of the AgPark in 2006 and 2007, prior to the completion of the comprehensive Sunol AgPark Management Plan.

Sunol AgPark Management Plan

Production of the *Sunol AgPark Management Plan* (Management Plan) was a requirement of the lease with the SFPUC and was funded as part of an initial grant by the SFPUC.



(2008)

It was also necessary for SAGE to have a 'roadmap' – a sound management, operations and financial framework – so that everyone involved could understand the goals of the project and work together to realize them. SAGE developed the



Sunol AgPark Agriculture Layout Plan (2008)

Management Plan over the course of a year with support from consultants and advisors with expertise in agriculture, beginning farmer operations, public education and natural resources stewardship.

The Management Plan contains the following chapters: Introduction; Vision, Principles and Goals; Existing Conditions; Master Lease Overview; Site Plan; Agriculture Goals and Strategies; Natural Resource Stewardship Goals and Strategies; Public Education Goals and Strategies; Management and Partnership Goals and Strategies; a Financial Plan; and an Appendix of Key Documents. Several of these topics are covered elsewhere in this publication. The Vision and Principles and Existing Conditions are noted in the Introduction chapter and the Master Lease is described in the SFPUC Perspective Chapter. Synopses of other Management Plan chapters – Agriculture, Natural Resources, Education and Financials – are covered in the respective sections below. The topic of Management and Partnerships is covered in various sections: partnerships by program area (agriculture, education, natural resources), and management in the staffing section below.

Overall, the Management Plan has proved to be both an enduring and a dynamic document. Most of the vision, almost all the goals, and many of the strategies have been achieved. The projected seven-year Financial Plan conforms very closely to the financial reality. The most significant deviation from the plan is that the complex organization chart that was envisioned did not come about, primarily due to insufficient staffing for the myriad management requirements.

Operations and Management

Staffing

The Management Plan specified a complex and ambitious staffing structure. The first hire was anticipated to be a Sunol AgPark Director, a position with responsibility for the development of all the education programs, as well as for oversight of the agriculture and natural resources activities. The Director would then hire and supervise three additional positions: a Farm/Site Manager, an Education Programs Coordinator, and a Natural Resources Stewardship Coordinator.

The reality was quite different from the anticipated staffing plan, due to changing needs on the ground and insufficient funding. In the early years (2006-2009), the critical need was for an experienced farmer to be an on-site AgPark Manager, responsible for establishing the irrigation system and farming protocols and providing day-to-day technical assistance to farmer tenants starting new operations. Initially this was a half time contract position, ably filled by Peter Rudnick, an organic farmer with 25 years of farming experience and a background in working with diverse beginning farmers.

Management and Partnership Goals

Sunol AgPark Management Plan, 2008

Realization of the Agriculture, Natural Resources, and Public Education Goals will require the fulfillment of the following Administration and Management Goals:

- 1. Manage the AgPark's agriculture, natural resource stewardship, and public education elements as a collaborative, sustainable system that is economically viable, ecologically sound, and provides value for all participants, stakeholders, and the community.
- 2. Demonstrate the feasibility of the AgPark concept by creating a working model.

With farming systems more established, in late 2008, SAGE hired the first Sunol AgPark Manager at 80% FTE, with responsibilities encompassing site management, farmer management and support, education program development and management and fundraising support. This challenging position was very capably filled by Cynthia King, whose background included developing the Stanford Student Farm, being a partner in a farm and working in conservation. Cynthia oversaw the development of the *Farming in the Watershed* standards-based curriculum, which became the basis for the AgPark school field trip program. She left because of funding uncertainty and in order to return to school for an MBA.

In 2011-2012, Roger Kubalek filled the lead position, now called the Sunol AgPark Site and Education Program Coordinator, at 80% FTE. Having grown up on a farm and interned at an environmental education program, Roger brought needed practical skills to site management, as well as dedication to educating students about organic farming. One challenge of the position as it was then formulated was dividing time between the SAGE office in Berkeley and the Sunol AgPark, which is about 50 minutes away and has no office facilities.

Starting in 2013, Aspen Kvicala took over as Sunol AgPark Site and Education Program Coordinator, a position she still holds. By this time, SAGE had removed all fundraising and most administrative responsibilities from the position, now at 50% FTE. As a farmer at the Sunol Ag-Park herself, Aspen has a close-up and timely understanding of site management needs and farmer issues. (Managing fellow farmers requires both overseeing AgPark farm policies enforcement and providing support to farmers; a dual role that is challenging but for the most part workable.) As a former educator and intern coordinator at a working educational organic farm, she has expertise in teaching students as well as in managing the contract educators who teach the majority of school field trips.

The position has now been structured so responsibilities in the SAGE office in Berkeley, including coordination with other SAGE staff on education programs, require one day per week and responsibilities at the AgPark take a day and half spread over three days. This works well for Aspen since she lives in Sunol and is at the AgPark in any case on most days, since she farms there.

Responsibilities of the Sunol AgPark Site and Education Program Coordinator job as it is currently designed include: *Farm management*: coordinating site infrastructure projects; communicating with AgPark farmers; acting as main liaison between farmers and the SAGE office; and hosting farmer meetings.

Education program: leading field trips; coordinating field trip logistics with teachers; planning field trip lessons and schedules; reaching out to and building connections with teachers; assisting in teacher/staff development days; mentoring high school interns; and teaching in-school curriculum lessons.

AgPark outreach and public engagement: leading farm tours and other specialized farm lessons; hosting public community volunteer workdays; tabling about SAGE and the Sunol AgPark at events; and assisting in events hosted at the Ag-Park.

Since the inception of the AgPark, SAGE President Sibella Kraus has served as the de facto Sunol AgPark Director, with responsibility for long-term planning, hiring, partner relations, fundraising and adjudicating issues when they arise. Sibella's extensive background working with farmers, public agencies and other stakeholders – and her vision, dedication and drive – have been indispensable in establishing the Sunol AgPark and enabling it to thrive. SAGE administrative, bookkeeping and support staff, led by Office Manager Johanna Ortis, have also had responsibilities for the administration of various aspects of Sunol Ag-Park operations.

The Management Plan called for the formation of a Sunol AgPark Advisory Committee (Advisory Committee) that would help guide the development of the AgPark and ensure its linkage with partners and collaborators. An initial Advisory Committee, formed in 2006, included staff representatives from the following members: the SFPUC; San Francisco Department of Public Health; Sunol-Glen School District; Alameda County Resource Conservation District (ACRCD); East Bay Regional Park District (Sunol Ohlone Regional Wilderness); Alameda County Office of Education; University of California Cooperative Extension; and San Francisco Unified School District.

The Management Plan also called for the formation of subcommittees focused on agriculture, education and natural resources, as well as a 'farmer group' and 'teacher subcommittee.' However, the Advisory Committee did not continue to meet and the subcommittees were not formed, mostly due to the fact that one-on-one relationships with key partners proved to be more effective for getting input. In addition, with staffing more limited than anticipated, administering committees that did not have essential functions was untenable. The 'farmer group' does meet approximately every month in the form of Sunol AgPark farmer meetings organized by SAGE staff.

Consultants and Advisors

Over the years, SAGE has retained several key consultants to provide agricultural expertise to the farmers on a range of production, marketing and business planning topics. Farmers cite this direct technical assistance as one of the major benefits to farming in the AgPark. All of the assistance is provided free of charge, as a benefit of farm license fees paid by farmers and funded additionally by grants.

Brett Melone, formerly the Executive Director of the Agriculture and Land-Based Training Association (ALBA) and now a California FarmLink Loan Officer, has been a long-term consultant to the Sunol AgPark. He had a leading role in developing the AgPark Feasibility Study and the Sunol AgPark Management Plan, has advised on AgPark issues, including farm policies and farmer transitions, and has provided direct business-related technical assistance to farmers. Brett's consultation time on AgPark issues has ranged from around 40 to 80 hours per year.



Jim Leap, who was University of California Santa Cruz Agroecology Program Farm Manager for over 25 years, has been the Sunol AgPark Farm Advisor since 2012. He provides direct technical assistance to farmers on production

Jim Leap, Farm Advisor

issues and overall farm management advice to SAGE, including oversight for managing fertility, weed, disease, tillage/soil, crop rotations and irrigation on a collective basis.

As the Mentor Farmer Consultant for SAGE's USDA Beginning Farmer and Rancher grant, Jim taught most of the production topic workshops, held at the Sunol AgPark and elsewhere, for beginning farmers. For the past three years, Jim's consultation time on the AgPark has averaged 10 to 16 hours per month. Another experienced local organic farmer, Dale Coke, also provided technical assistance support to the Sunol AgPark for a year.

SAGE retained key education consultants to produce the *Farming in the Watershed* curriculum, and continues to contract with four to six experienced agro-environmental educators to teach the education field trips, in-school programs, and high school program. SAGE has been fortunate that ACRCD staff have been able to provide considerable and essential consultation about the natural resources stewardship aspects of the Sunol Ag-Park as part of their own services provision scope. District Conservationist Amy Evans in particular has contributed her great expertise, passion and personal time to the Sunol AgPark in the development of the habitat hedgerow and the high school education program.

Infrastructure

SAGE has established a variety of infrastructure elements and improvements at the Sunol AgPark over the past eight years, including fencing, roads, irrigation and potable water systems, sheds, and other infrastructure for farmers and visitors.

The site plan of the Sunol AgPark is determined by the layout of one-acre field plots, with most plots being 100 ft by ~435 ft, and other one-acre plots having various dimensions due to the irregular shape of the AgPark. (See page 19.)

Fencing and Roads

In spring 2006, SAGE commissioned a local contractor to build a perimeter game fence with three vehicle gates and two additional pedestrian gates around what was at that point an 18-acre parcel. This fence was essential to have in place before farming operations could start, due to the presence of deer and feral pigs.

The interior farm roads along the front edge and along the axis of the AgPark follow the plot layout. Initially these roads were packed dirt. With a cost-share Environmental Quality Incentives Program (EQIP) contract, and in-kind support from the SFPUC, SAGE crowned the two main roads and added gravel.

I<u>rrigation, Water and Waste</u>

The main irrigation system was also established at the outset. This consisted of: a 4-inch aboveground pipe connection to the SFPUC raw water



Laying irrigation pipe (2006)

mainline, including pressure relief valve and backflow preventer; a large sand-filter; approximately 2,000 feet of underground 2-inch mainline along the major axes of the AgPark; and standpipes with meters to serve each acre or two. The system was designed with sufficient flexibility to allow for anywhere from ½ acre to all 18 acres to be irrigated at once. It has functioned well, with just a few underground leaks and knocked-over standpipes needing repair. Farmers are responsible for all surface lines and drip systems within their plots.

SAGE established two additional meters in the 1.5-acre orchard, upon assuming management of this nearby SFPUC parcel in 2011.

In order to accommodate demand from farmers and also from school field trip groups, in 2010 SAGE added a potable water hookup at the fence line between the Sunol AgPark and the SFPUC corporation yard, which already had a potable water mainline. The AgPark has two portable toilets. The longer-term solution of compostable toilets has proved elusive due to regulatory restrictions.

Sheds, Structures and Signage

Over the first couple of years, SAGE constructed a simple 16 ft by 8 ft shed to store education program supplies and hold meetings, and a shaded ramada structure near the main hedgerow as another outdoor meeting area.

In 2013, SAGE completed a 600-square-foot covered outdoor classroom, which can accommodate one class of 30 students seated or two classes standing. This structure, also used as the main farmer meeting area, provides protection against both rain and heat and has been a very welcome addition to the AgPark. Eight picnic tables with benches are located under the open-sided structure. Volunteer groups have constructed the picnic tables with materials paid for by SAGE.

SAGE has established basic Sunol AgPark signage, including a sign at the front gate, which is based on a beautiful Sunol AgPark logo created by a graphic designer, Noreen Fukumori. In addition, SAGE provides small signs for each farm operation at the AgPark and has worked with volunteers to place identification tags on the native plants in the AgPark hedgerows.

Other Infrastructure

SAGE has considered over the years a number of other improvements, including an electrical drop, requested by farmers for cooling infrastructure and baby chick incubators. This has not yet been implemented due to cost.

SAGE has also considered adding a common packing shed, equipment barn and greenhouse, which were not implemented due to lack of demand. Instead, it has proved most convenient for each farmer to construct their own greenhouse, small supply/tool sheds, and shaded packing areas. SAGE requires site and design plans before farmers can begin construction.

Farming- The Core Program Area

As stated in the Management Plan, the core activity of the Sunol AgPark – the agricultural operation – is a working farm that provides multiple small farmers with access to good quality land and opportunities to develop a small business enterprise. The Management Plan characterized the AgPark agricultural operations as 'communitybenefit farming'. This means that the farmers are committed to selling their crops locally, are involved with community food systems and agree to offer some form of public agricultural education. The target farmer group was always anticipated to be beginning farmers, with limited resources, including immigrants with farming backgrounds adapting to a new farming culture.

Background and Policy Documents

The Management Plan outlined some of the key terms and conditions from the Farmer License Agreement, including:



lu-Mien Village Farmers (2008

Agriculture Goals

Sunol AgPark Management Plan, 2008

- 1. Establish a working farm to optimize opportunities for multiple tenants to achieve stable, safe, and profitable business enterprises within a culture of cooperation.
- 2. Develop farming infrastructure, technical support, and management systems that support the operations and viability of the farmer tenants.
- 3. Develop sustainable farming operations that conserve natural resources, enhance soil fertility, and that follow organic farming practices.

Term: One year maximum term, no automatic renewal of the license. This was an SFPUC Lease requirement. In fact, SAGE and the farmers act on the assumption that License Agreements will be renewed annually for farmers wanting to continue at the AgPark, provided they are abiding by Farm Policies, finalized in 2010. *Practices*: Organic practices are required. The Farm Policies further specify that organic certification is not mandatory but that farmers must keep land organically certifiable by submitting to SAGE the monthly Organic Farming Input Records (OFIRs) required to demonstrate compliance with organic practices. SAGE determined that it was most practical for farmers to have the responsibility for maintaining organic practices and making the 'certified' vs. 'certifiable' decision for themselves, rather than have certification be in SAGE's name.

Experience: Farmers need to either demonstrate organic farming experience or work under the guidance of a mentor. This has proved to be challenging. The farmers attracted to and now engaged in the AgPark generally have less farming experience, including conversance with organic practices and business and marketing skills, than was originally anticipated. Aspiring farmers started at the AgPark with experiences such as participation in an apprenticeship program, being a farm intern, plant breeding in lab conditions, farming in another culture, all which provided foundational knowledge. However, there is no getting around the fact that learning farming takes time. The USDA gets it right in designating farmers with less than 10 years of experience as 'beginning farmers'.

Improvements: All improvements on farmers' plots need to be pre-approved in writing. SAGE has found that some beginning farmers are not accustomed to submitting plans.

Business Plan: New farmers are required to submit a business plan that demonstrates capacity to undertake a License Agreement. SAGE provides template options but does not require a specific format.

The Management Plan also outlined key protocols for soil management, pest management and water resources management. Topics covered in additional sections of the Management Plan include: farmer qualifications (i.e. some experience with small-scale organic farming and 'collaborative' mindset); process for admission of new farmers; processes for SAGE to revise the Farmer License Agreement and for farmers' annual renewals; a grievances process; and the infrastructure provided by SAGE.

In 2010, two years after completing the Management Plan, SAGE developed the Farm Policy document, which was needed to clarify and amplify the many requirements, policies and procedures outlined in the Management Plan and Farmer License Agreement. The Farm Policy document was developed in close collaboration with the Stanford Nonprofit Law Clinic, which at the time was also advising other organizations that serve small-scale beginning farmers, including California Farm-Link and ALBA.

For the most part, the Farmer License Agreement and the Farm Policies, with modifications over time, have served both SAGE and farmers well. Some key changes have been a reduction in the License Fee from \$1,500 per acre per year, to \$1,000 per acre per year; and moving the start of the one-year License term from January 1 to December 1 to enable farmers more time to plan for the growing season ahead. To keep current and responsive to all the issues that the Farm Policies address, SAGE staff and advisors have spent considerable time each fall reviewing policies internally and requesting feedback from farmers.

Several lingering challenges with the functionality of these documents concern SAGE's consistency in enforcement. For example, when payment of the license fee is not made on time, there is not an effective means to charge a late fee, partly because SAGE has been reluctant to levy a fee that might overburden farmers financially.

Other challenges involve SAGE not having clear systems and a lack of consequences for farmers'

accountability. For example, it has been difficult to get farmers to provide OFIRs on any regular basis. Although providing these is part of the License Agreement, there is no established incentive or disincentive to comply. Not all farmers have maintained up-to-date personnel records, have obtained permission in a timely manner when planning events, or have requested releases prior to allowing visitors on the premises. In addition, storage and general cleanliness/tidiness have been issues for some farm operations at the AgPark.

Yet other challenges concern the difficulty of farmers' being in compliance with policies for their land management. For example, keeping the ground relatively free of invasive weeds, such as Bermuda grass, has been infeasible when the farmers do not have the equipment to efficiently do so.

Some changes to the Farmer License Agreement and the Farm Policies made or underway include:

- Improving compliance by issuing written warning letters when compliance issues arise. Written warning letters are issued following a lack of compliance and after a verbal warning is conveyed. After two written warnings for the same type of offense, the licensee is at risk of losing their license.
- Streamlining organic 'certifiability' requirements by requiring submission of OFIRs on a quarterly rather than monthly basis.
- Clarifying parcel transfers with California Certified Organic Farmers (CCOF), which had been difficult for SAGE to track. In 2012, SAGE added a requirement that the new/receiving farmer has to pay the parcel transfer fee when certified organic farmland changes hands between AgPark farmer tenants.
- Amending the contract with the Mentor Farmer Consultant (currently Jim Leap) to include the following tasks: conducting quarterly reviews of

each farmer's OFIRs and annual reviews of each farmer's Field Systems Plan (another requirement for organic 'certifiability').

- Providing protocols for farmers to do maintenance work on their tractors on site.
- Clarifying that SAGE does not actually manage any CCOF certification, but does need to ensure continuous management by a certified entity or continued adherence to organic standards so that ground can be organically certifiable at any time.

Recruiting, Selecting and Retaining Farmers

When the Sunol AgPark was first being established in 2006, SAGE recruited four farmers: one by promoting the opportunity through California FarmLink (Baia Nicchia), and three others by promoting the opportunity through local urban agriculture networks (People's Grocery, Iu-Mien, and Mo Better Foods). Since that time, and as the AgPark has become well-known, people interested in farming there have contacted SAGE directly.

SAGE has developed a four-step process for selecting new farmers:

Step One: Interested people or groups submit a prospective farmer interest form.

Step Two: If there is land available and if it seems that there is a potential 'fit,' SAGE invites the farmer to tour the Sunol AgPark and informally meet staff and the other farmers.

Step Three: If there is continued mutual interest, the prospective farmer is invited to submit a business plan, which is reviewed by the Mentor Farmer Consultant.

Step Four: Once the business plan is approved, the prospective farmer attends a farmer meeting.

Step Five: Assuming that the group dynamic is

good, SAGE then extends an offer to farm at the AgPark.

There have both been continuity and turnover among the farmers, for a variety of reasons. The Farmer Perspective Chapter, which includes profiles of current and past farmers, gives much more detail about the farmers' operations and their experiences at the Sunol AgPark.

As the chart below shows, one farmer, Baia Nicchia, has been farming at the Sunol AgPark since its inception, and another, Terra Bella, almost as long. Both farmers live nearby with their families and have become part of the Sunol and Pleasanton communities. These two farms, along with Foolish Hens, have increased and then decreased their acreage, as they have adapted to find the best balance of production, markets and viability. Along with Namu Farm, these four farming operations constitute the 'old guard' compared to the four new farming operations that started in 2014: Happy Acre Farm, Feral Heart Farm, Root & Bloom Farm and Jellicles Farm.

There are a number of reasons why farmers who started at the Sunol AgPark have left. Some farmers have left the AgPark because they have

AgPark Farm Tenancy											
Farm Name Acreage											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
Current Farmers											
Baia Nichia	1	7.2	7.2	7.6	9.5	8.55	11.03	8	6.8	6.8	
Terra Bella			0.5	2.2	4	5.95	3.15	3.15	3	3	
Namu							1	1	1.2	1.2	
Foolish Hens								2	0.5	0.5	
Jellicles									1.5	1.5	
Feral Heart Coop									1	1	
Root & Bloom									0.5	0.5	
Happy Acre									1	2	
Former Farmers											
People's Grocery	2	2	2	3.5							
lu-Mien Village Farms	2	4	4	4	4	2.25	2.5	3			
Fico Figs			0.5	0.5	0.5	0.5	0.5	2.5			
Mo Better Foods	2										
Peter Rudnick			1.5								
Fallowed or vacant	11.85	5.65	3.15	1.05	0.85	1.6	0.67	0.85	5	4	
Total Acres	18.85	18.85	18.85	18.85	18.85	18.85	18.85	20.5	20.5	20.5	

changed their career path and left farming; other farmers have decided to relocate their farming operation. For example, People's Grocery, a nonprofit organization focused on food access issues in West Oakland, decided that it was more important to focus their food production efforts within their Oakland community. Mo Betta Food, which farmed for just one year at the Sunol AgPark, also decided that a farming operation located 30 miles from its Oakland base was too far afield. The owner of Fico Figs left because of an employment change; and Peter Rudnick's farming operation was tied to his AgPark Farm Manager position at the time.

The Iu-Mien Village Farms started out as a USDA-funded project of the East Bay Asian Youth Center (EBAYC). It was a collaboration of Oakland residents of Mien ethnicity, many of whom had come from farming backgrounds in Laos and wanted to start farming again. Following the grant, several Mien families started independent farm operations at the AgPark with a focus on strawberry production, along with some Laotian vegetable crops. However, challenges with organic strawberry production (e.g. rotation needs, committed markets, and sufficient labor for peak harvests) eventually proved to be insurmountable.

Technical Assistance to Farmers

The Sunol AgPark was founded with the plan that SAGE would provide capitalized infrastructure, a management framework and limited technical assistance to farmers. A foundational supposition of the AgPark was that the farmers would already have a measure of experience and resources, and thus, the technical assistance needed to help them launch and grow viable farm businesses would be less than it has, in fact, turned out to be.

As noted previously, within the first few years, it became apparent that the AgPark was attracting and engaging farmers who had less farming experience, including conversance with organic



Advisor Rex Dufour with Farmer Chan Saelee (2007

practices and marketing strategies, than was anticipated in the original model. The initial requirement that farmers either demonstrate organic farming experience (as shown by their background and a starting business plan) or work under the guidance of a mentor (that they would provide) proved to be problematic.

While all farmers who start at the Sunol AgPark have at least several years of some kind of farming experience and provide a credible business plan, the fact is that becoming a good farmer takes many years of learning and experience. Thus, provision of technical assistance has been a more critically important and complicated element of the overall project than was initially imagined. Accordingly, SAGE's approach to providing technical assistance has shifted over time.

SAGE has endeavored to meet the farmers' technical assistance needs through several means, as detailed in the Staffing section above. In the first three years, when the half time Sunol AgPark Manager was a highly experienced organic farmer (paid for by initial AgPark grants), SAGE provided intensive technical assistance to farmers. One challenge was that not all farmers welcomed mentorship, which led to discussions at SAGE about which practices to recommend as best practices (e.g. bed spacing) and which to require (e.g. sound weed management).

From 2009 to 2011, SAGE lacked the grant funding to continue to employ an on-site experienced farmer as AgPark Manager, nor did it seem to be essential, since farmers at the time seemed to be finding their feet. During this period, SAGE had two Farm Managers who had some farming experience, along with strong skills in facilitating collaboration between the farmers, coordinating shared resources (such as all-farm EQIP contract practices and compost deliveries), and managing the site, including overseeing maintenance of irrigation systems, roads and fences. SAGE also continued to provide farmers with one-on-one business planning and expert organic farming consultation on a regular basis.

In the fall of 2011, SAGE received a three-year Beginning Farmer and Rancher (BFR) grant, which, combined with other resources, allowed SAGE to considerably scale up the provision of technical assistance for farmers. This assistance consisted of workshops, follow-up one-on-one technical assistance, field trips to exemplary nearby farms and cultivation support. Many of the Sunol AgPark farmers attended the workshops/ field days held at the AgPark on topics including on-farm hedgerows, soil fertility, irrigation management, weed management, pastured poultry and food safety. Related BFR workshops held nearby, which were also attended by Sunol AgPark farmers, focused on collaborative marketing, business planning, agri-tourism and 'production 101'. Including the AgPark farmers, approximately 300 people attended these workshops.

The one-on-one technical assistance provided by Brett Melone and focused on business planning was generally available on an on-demand basis through the BFR grant term. One-on-one production technical assistance was provided by Jim Leap, again on an on-demand basis, through his biweekly all-day visits to the AgPark.

In addition, when Bermuda grass got out of control at the AgPark, Jim provided much-

needed contract tractor work (supplying his own implements that the two AgPark farmers with tractors did not have) to help eradicate this invasive weed on farmers' fields and on fields that SAGE had fallowed. This situation caused SAGE to revisit the question of whether it might be feasible to facilitate some kind of shared equipment program. However, to date, what seems most feasible is the 'tractor services for hire' option that Jim Leap provided. Additional periodic additional technical assistance has been provided by the Natural Resources Conservation Service (NRCS), the local University of California Cooperative Extension Advisor, National Center for Appropriate Technology (NCAT) and CCOF, as part of its certification process.

SAGE expects to continue to provide a baseline of technical assistance, covered by farmers' land fees, into the future. This baseline will increase again if a new BFR proposal, on which SAGE is a collaborator, is successful.

In the meantime, SAGE's Sunol AgPark Site Manager continues to coordinate communications between farmers and the SFPUC about logistics (e.g. gates, keys, security, after-hours access), organize monthly farmer meetings, facilitate shared purchase of inputs, address farm-wide pest control issues (e.g. ground squirrels), supervise annual soil testing of all fields, lead custom tours for numerous groups, and oversee the overall site, including improvements.



Business planning workshop for farmers (2011)

The SAGE office staff continues to support farmers with organic certification procedures, insurance, and obtaining permits for special events.

SAGE also manages overall site improvements, covered in the Infrastructure section above, and farm- wide EQIP contracts, covered in the Natural Resources Stewardship section.

Natural Resources Stewardship-The Farm-Nature Connection

Background and Policy Documents

As described in the Introduction, the setting of the Sunol AgPark is ideal for farming, with Class 1 soils on nearly level terrain, high-quality water with reliable delivery, and a climate conducive to year-round cropping. Another valuable element of the AgPark is its scenic setting, in a valley framed by oak-dotted hills and adjacent to the banks of the Arroyo de la Laguna – where the mature, layered, riparian forest and shaded creek support a rich array of wildlife.

A foundation of the partnership between SAGE and the SFPUC is the synergy between the protection of the site's natural resources and use of organic farming practices. In many ways, the Sunol



Habitat for pollinators and beneficial insects

AgPark has enhanced the natural resources values of the site. The oncecompacted hay field has become more fertile, more permeable and far more biodiverse at the plot scale and also at the landscape scale. This enhancement is illustrated quantitatively by the annual soil tests, which

Natural Resource Stewardship Goals

Sunol AgPark Management Plan, 2008

- 1. Protect and enhance natural resources overall through activities integral to and integrated with the sustainable agriculture practices.
- 2. Work with the USDA NRCS and ACRCD to complete the Conservation Plan for the AgPark and implement the conservation practices called for in the plan according to the plan's timetable. Implement additional resource protection practices as needed.
- 3. Develop and maintain the AgPark Setback Area (filter strip, grass buffer and limited use zones as approved by SFPUC) and other common areas in order to prevent negative impacts to ground water and adjacent streams from farming practices and to provide enhanced habitat for pollinators and beneficial insects.
- 4. Effectively organize and utilize stewardship volunteers to assist AgPark staff with the planning, installation and maintenance of the filter strip, and with monitoring, farm clean-up and other tasks as needed under the leadership of the Natural Resources Coordinator.
- 5. Promote and facilitate experimentation and research that supports the goals of the AgPark agriculture and natural resources components.

show year by year improved soil fertility, and by the marked increase in the number and variety of song birds and pollinators in the Agpark.

A Conservation Plan for the Sunol AgPark, developed by the local USDA Natural Resources Conservation Service (NRCS) office, was completed in 2008, shortly after the completion of the Management Plan. It outlined detailed recommendations and specifications for conservation practices. Most of these practices were eligible for funding from the Environmental Quality Incentives Program (EQIP) and have since been undertaken with such cost-share funding. These practices have included: the establishment of a 30-foot-wide filter strip, grass buffer and habitat hedgerow along 600 feet of the Sunol AgPark closest to the Arroyo de la Laguna; other insectiary plantings; cover cropping to increase soil fertility; and irrigation management and mulching to facilitate water conservation.

Implementation

The planning, establishment and maintenance of the habitat hedgerow, currently at 18,000 square feet (SF), almost a half-acre, has been a major focus of SAGE's natural resources management efforts. In close collaboration with dedicated ACRCD conservationists, SAGE engaged a volunteer landscape architect to design the site plan and has organized numerous community volunteers over dozens of workdays to plant many kinds of native plants and shrubs and to help with ongoing maintenance. The temporary irrigation line (a lay flat with smaller lines to plants) is still in place to accommodate the planting of replacement plants, but is almost no longer necessary.

Over the past three years, SAGE has worked with high school students through the Youth Bridging Nature and Agriculture program (see Education section below), to establish a second insectiary hedgerow (3,000 SF) along the fence on the opposite side of the AgPark. Together, these two hedgerows benefit farmers, by providing habitat for pollinators and beneficial insects, and benefit the public, by providing inviting living laboratories for learning about the intersection of nature and agriculture. Almost all plants have identification tags. Maintenance of these two hedgerows requires an average of four hours of the Site Manager's time per month and about 300 hours of volunteer labor per year.



Family planting hedgerow during AgPark workday (2014)

Volunteers are engaged through approximately six workdays per year. When possible, SAGE recruits large groups of volunteers. For example, one company employee workday resulted in significant achievements, including 20,000 SF of hedgerow being mulched with about 50 cubic yards of wood chips. Examples of other volunteer-led projects include the establishment of blue bird boxes by a local Sunol resident and of raptor perches by a local Boy Scout troop.



Clif Bar Company workday (2013)

Public Education and Engagement- Fostering Stewardship

This section discusses SAGE's development of the public education component of the Sunol AgPark. Public education and engagement have been integral elements of the AgPark from its inception, along with the complementary goals of farming and natural resource stewardship. The public education program was conceived of as delivering experiential learning opportunities for multiple audiences related to the farming operations, Alameda Creek watershed and the cultural history of the area.

This section is divided into the following: the development of the Education Plan; the launch and implementation of the formal education program to schools; and informal public education and outreach at the AgPark, such as public events, workshops and volunteer opportunities. Also included is a summary of accomplishments of the Education Program.

Developing the Education Program

During the early phase, when necessary infrastructure was being developed and farming activities were being initiated, public education and outreach were limited and informal. Activities mostly centered around introducing the AgPark to the local community and groups of stakeholders.

Development of the Education Plan (2008-2010)

In 2008, with the farming element of the Sunol AgPark well underway, SAGE started developing a formal Education Plan for the site, based on the education section of the 2008 Management Plan. The education and interpretive programs SAGE planned for students, teachers and community groups are fundamental to the Sunol AgPark model. These programs were designed to foster environmental awareness and connection to place, and promote sustainable agriculture and natural resource and watershed stewardship.



Students examining compost (2010)

Public Education Goals

Sunol AgPark Management Plan, 2008

Over the next three years, create and implement for diverse audiences, interpretive programs which achieve the following goals:

- 1. Offer programs for students that foster understanding of the connection between good nutrition, local agricultural production, natural resource stewardship.
- 2. Engage with youth groups and underserved urban youth to offer educational opportunities, including training, internships, and special projects related to nutrition, agriculture and natural resource conservation.
- 3. Provide educational and interpretive opportunities for the public to learn about sustainable agriculture and natural resource conservation, water conservation and use, the regional water distribution system, and the cultural and land use history of the region.
- 4. Engage local communities in workdays, education programs, and on-site special events.



Farming in the Watershed school field trip (2012)

Development of the Education Plan and its components, especially the *Farming in the Watershed* curriculum, built on SAGE's experience creating other educational programs for kids, especially its *Kids Cook Farm-Fresh Foods*, a sustainable agriculture curriculum for students in grades two through seven, that includes recipes, activities and farm profiles. SAGE produced *Kids Cook* in 2002 for the California Department of Education, with a forward by Delaine Eastin, who was at the time the State Superintendent of Public Instruction.

Five-Year Education Plan (2010-2015)

SAGE completed the five-year Education Plan in June 2010. The Education Plan drew heavily on the Management Plan and encompassed three major themes:

- Community Health, Food Systems and Sustainable Agriculture
- History of Agriculture and Water Systems in Sunol Valley
- Natural Resource Stewardship

Two of these three themes directly relate to the SFPUC goals for educating the public about its water system, Alameda watershed and watershed stewardship. The other theme relates to agriculture and food systems, including their intersection with natural resources stewardship.

Pilot/launch phase (2009-2010)

In conjunction with the development of the Education Plan, in 2009, SAGE launched a pilot program of its educational programming, with a focus on developing a standards-based curriculum for school field trips. The resulting 18-lesson curriculum, called *Farming in the Watershed*, was developed by Margaret Kelley, a highly experienced outdoor educator, with support from SAGE staff, a teacher advisory board, an education committee and field testing instructors.

Analysis and assessment of this pilot phase were used to inform the *Farming in the Watershed* curriculum, completed in spring 2011. This program is described in detail below.

Formal Education Programs for Schools

Building on the pilot phase and based on the Education Plan, SAGE developed its formal education programs for school children centered on activities at the Sunol AgPark. SAGE's Environmental Education and Service Learning Program (also called the Agroecology Education Program) was designed to inspire environmental stewardship in the next generation by providing hands-on sustainable agriculture education and service learning to urban students who often lack opportunities to discover for themselves how food is grown or get their hands dirty planting and tending food crops. SAGE collaborated with teachers and school administrators to tailor programs to meet each student group's particular educational needs.

SAGE's Environmental Education and Service Learning Program includes three elements:

- Farming in the Watershed, for 4th-8th grade students
- Youth Bridging Nature and Agriculture (YBNA), for high school students
- Summer Farm Internships, for high school students and young adults
SAGE's Environmental Education and Service Learning Program has provided and continues to provide urban children, youth and families with hands-on, experiential education about sustainable agriculture, watershed and ecosystem health, and community health and nutrition, while inspiring environmental consciousness, team-building and academic improvement. While rural Sunol is only a 40-minute drive from urban Bay Area neighborhoods, it feels a world away to the urban children and youth who participate in SAGE's programs.

Target Audience

SAGE's Environmental Education and Service Learning Program was fully built-out as of the 2012-13 school year. It currently serves, per year, more than 2,000 students in 4th through 12th grade from Bay Area schools and youth organizations. SAGE focuses its programming on youth from diverse, urban, low-income communities with high percentages of minorities, recent immigrants and English language learners.

SAGE's target audience is urban, public Title I schools, for which SAGE underwrites all or most program costs and transportation through grants. Private and non-Title I public schools with funding for enrichment activities cover approximately 3% of SAGE's program costs through modest program fees on a sliding scale of approximately \$1-\$10/student.

SAGE serves over 40 schools in nine Bay Area school districts: Oakland, Fremont, Hayward, Livermore Valley, Newark, Piedmont, San Carlos, San Francisco and New Haven. The ethnic makeup of students participating is approximately 18% African American, 23% Asian/Pacific Islander, 29% Caucasian, 26% Hispanic, 1% Native American and 3% other.

Children and youth in the target population are rarely exposed to gardening at home or outdoors activities with their families; many have never been on a farm before they come to the AgPark. By addressing this lack of exposure to agriculture and nature, this program also addresses multiple, interrelated problems experienced by urban Bay Area youth such as obesity, reduced physical activity, lack of access to nutritious food, lack of access to outdoor recreation, low academic achievement and lack of teamwork skill-building opportunities. SAGE's hands-on education program excites students about academics by putting book learning into real-world context, increases health by providing a connection between urban youth and the food that they eat and aids youth development by building teamwork and self-esteem.

Farming in the Watershed

SAGE's Farming in the Watershed program is for students in grades four through eight. Programming is delivered by SAGE staff and highly experienced and skilled contract educators, some of whom are also AgPark farmers. Programming is based on the standards-based *Farming in the Watershed* curriculum.



Farming in the Watershed Curriculum Cover



Farming in the Watershed in-school program (2012)

SAGE's Farming in the Watershed Program consists of two interrelated types of programming:

On-Farm Education at Sunol AgPark: Education programs at the AgPark follow SAGE's standardsbased Farming in the Watershed curriculum, which consists of 18 engaging, detailed lessons.

In-School Education Program: SAGE complements and extends on-farm learning for fourth through eighth graders by bringing Farming in the Watershed's experiential learning activities to the school. Students learn about topics such as the geography of watersheds, the water systems that serve both farms and cities, and the relationship of water to the production of the food they eat. Students tour their schoolyards and surrounding areas to identify how scientific principles learned on the farm are at work in the school and urban environments as well as the rural environment. In-school programs utilize the Farming in the Watershed curriculum.

Goals specific to the Farming in the Watershed Program include:

Environmental stewardship and environmental literacy: Through immersion in both cultivated and wild landscapes, students gain a new personal connection to nature. Hands-on learning helps students understand the links between watershed ecology and their foodshed, as well as their own role in the complex web.

Academic achievement: Students get excited about learning, especially related to science, math and nature, as they take book learning into the real world via SAGE's Farming in the Watershed curriculum. The curriculum directly addresses the California State Educational Standards for fourth through eighth grade students, especially in the subjects of English Language Arts, Science and Health Education.

Youth development and teamwork skills: Children develop teamwork by working in small groups.

Health and wellness: Participants eating fruits from the farm experience healthy food as delicious food.

Youth Bridging Nature and Agriculture (YBNA) Service Learning

SAGE's Youth Bridging Nature and Agriculture connects underserved high school students from urban East Bay communities to their local foodshed and the natural world through experiential learning about sustainable agriculture and ecology. Over a series of field and classroom days throughout the school year, youth get their hands



Students planting a hedgerow, service learning program (2012)

dirty designing and planting a hedgerow of native, ornamental and edible plants with farmers at Sunol AgPark, investigate ecology of the Alameda Creek watershed, enhance habitat with conservation scientists, collect data, learn

farm economics and discover green careers, while working closely in teams with educators and green career mentors.

Youth Bridging Nature and Agriculture is a fourpart service learning project with two classroom visits and two field trips for each school. The program highlights exposure to experts in the fields of agriculture and conservation, and to skill-building in landscape design, farming and data collection. The students learn about hedgerows and then each class of 30 students designs and plants 100 square feet of new hedgerow. Goals specific to YBNA include:



Student learning hedgerow design (2013

Academic achievement and science and math learning: YBNA participants solidify their understanding of plant and soil sciences, entomology, ecology and stream biology as they engage in hands-on activities such as collecting survey data and enhancing habitat. In the classroom, students engage in science and spatial math as they work in teams to design their hedgerow.

Career development: Without in-person exposure to nature and agriculture, and to real-world science and math career connections, youth may not be aware of professional careers to which they can aspire. Because of stereotypes and the lack of role models that reflect their background in green careers such as ecology, sustainable agriculture or landscape design, young people of color are not choosing these fields. In response, SAGE's YBNA program exposes students to green and science career-pathways through presentations and working alongside professionals such as: farmers, entomologists, landscape architects, naturalists, native plant experts and chefs. By providing interaction and information about internships and post-secondary education, the project offers underserved urban youth a way to envision themselves in green and science career fields.

Youth development and teamwork skills: Carrying a project from design through implementation with green career mentors, students gain self-esteem and teamwork skills. They feel a sense of pride in their accomplishments and their abilities and in seeing the real-world, living manifestation of their hard work.

Health and wellness: Participants benefit from physical exercise and improved knowledge of organic farming and good nutrition, as well as where to find locally produced food and how to get involved in small-scale agriculture in their community. Participants eating fruits from the farm and soup made from farm vegetables experience healthy food as delicious food.

Summer Farm Internship Program

In summer 2013, SAGE launched a new Summer Farm Internship Program to provide job training and intensive hands-on education for high school students and young adults. The program has thus far been relatively small in scope: two to three internships, with modest stipends, per summer. Interns work side-by-side with experienced Ag-Park farmer-educators.

Goals specific to the Summer Farm Internship Program include:

• SAGE provides a significant hands-on job



Sam (left) and Melinda (right) working as high school summer interns (201

training/learning experience for interns about the art, science and craft of farming from excellent farmer-educator mentors.

- Interns learn about work ethic generally and what the particular job responsibilities are of a farmer.
- Interns help farmers accomplish the work they need to do.
- Interns set and meet their own learning and job training goals.

SAGE contributes to creating a pipeline for the next generation of farmers by mentoring new farmers from diverse backgrounds.

Evaluation Methodology

SAGE's Environmental Education & Service Learning Program is a fully built-out, mature program refined over years of implementing aspects of the program, gathering feedback, evaluating responses and making adjustments to better

carry out the goals and serve the target population. SAGE developed a goals/activities/metrics model to make data collection and evaluation a more streamlined and consistent process for each of the three aspects of the Program. In addition, SAGE works from detailed logic models that spell out short- and long-term cognitive, behavioral and emotional goals, with related outcomes.

Evaluations measure specific metrics that are based on program goals and are reinforced through program activities. The primary evaluation tool for Farming in the Watershed field

Formal Education Program Accomplishments														
	Pilot	Phase	Year 1			Year 2			Year 3			Year 4		
	2008	-2010	2010-2011			2011-2012			2012-2013			2013-2014		
	# of	# of	# of	# of	% Low	# of	# of	% Low	# of	# of	% Low	# of	# of	% Low
	Schools	Students	Schools	Students	Income*	Schools	Students	Income*	Schools	Students	Income*	Schools	Students	Income *
Farming in the Watershed:														
4th-8th Field Trip		600	8	301	20%	26	1237	38%	23	1529	48%	27	1742	33%
Farming in the Watershed:														
4th-8th Grade In-School			N/A			5	322	20%	12	671	67%	21	830	43%
Service Learning for														
Middle & High			2	112	0%	1	43	0%	0	60	0%	1	160	30%
Youth Bridging Nature &														
Agriculture Program for														
High School Students		145				1	40	N/A	2	198	50%	3	200	67%
Totals		745	10	413		33	1642		37	2458		52	2932	
* Low-income means 50% or more students are eligible for free or reduced priced meals.														

trips is surveys with quantitative and qualitative measures for students, and evaluations for teachers, conducted after on-farm and in-school programs. Outcomes for Youth Bridging Nature and Agriculture are measured through pre- and post-surveys delivered to students, as well as observation of and some interviews with students, and evaluations for teachers. The Summer Farm Internship Program is evaluated based on pre- and post-interviews with interns, review of extensive field journals kept by interns, formal evaluations filled out by interns, and interviews with farmermentors about their experiences working with interns.

Informal Education Programs – Community Engagement and Outreach

SAGE organizes community outreach and education activities in order to engage Sunol residents and other locals with the AgPark farmers, to accommodate groups that want to tour and have events at the Sunol AgPark, and to connect East Bay communities and families with the beautiful, productive and accessible AgPark farms. More broadly, through these activities, SAGE aims to increase eco-agricultural literacy and broaden the community of support for regional sustainable agriculture.

Community Field Work Days

SAGE hosts Community Field Work Days at the AgPark four to six times per year to encourage community members to participate in volunteer farm and natural resource stewardship opportunities while they enjoy access to open space and recreation on the farm. Community Field Work Day volunteers help with ground preparation, planting, mulching, weeding, making plant identification tags and curating the hedgerow for visitors, as well as with other farm and restoration-related tasks. SAGE invites community groups, school groups and local businesses to participate. All students who have come to the AgPark on field trips are invited to return with their families for Community Field Work Days and other family-friendly public events.

Community Garden Plots

In response to requests and interest from Sunol residents, SAGE dedicated around 1/6th of an acre as the Sunol Community Garden. Twelve Sunol residents organized in two groups have established beautiful, productive garden beds next to the ramada, near the riparian edge of the farm. In exchange, the community gardeners gladly volunteer on Work Days and for special AgPark projects.

Special Events

SAGE has hosted many large events at the Sunol AgPark. Below are a few outstanding examples:

Annual Harvest Festival: Held in October, this annual gathering attracts more than 1,000 visitors who enjoy its U-Pick pumpkin patch, farm tours, information and demonstrations from local businesses, government agencies and nonprofit partners.



Sunol AgPark Harvest Festival (2013)

Beginning Farmer and Rancher Celebration: Held in July 2014, this event celebrated the region's beginning farmers and ranchers, the next generation of farmers in the Bay Area.



Clif Bar Company Workday (2013

Clif Bar Company Workday: In collaboration with Volunteers for Outdoor California (and with all materials paid by SAGE), around 300 Clif Bar company employees spent a day at the AgPark. This dedicated, skilled and enthusiasm group accomplished the following significant tasks: construction of over 1,000 feet of fence around the orchard (and removal of the old fence); weeding and mulching over 10,000 square feet of native plant hedgerow; building five picnic tables with benches; constructing the trellised roof for the ramada; clearing the site for construction of an outdoor classroom; building shelving in the SAGE storage shed; planting SAGE's one-acre pumpkin patch; and working with farmers on various projects.



Outstanding in the Field Dinner (2013)

Outstanding in the Field Dinner: SAGE hosted this gala dinner for three years in a row, for over 100 guests per year.

Slow Money Northern California: This annual Farm Fest, hosted for the first time at the AgPark in 2013, brought together around 150 farmers, food entrepreneurs, investors and the Slow Money community to network and enjoy dinner on an exemplary Bay Area farm.

Sunol AgPark Celebration: This event was held in fall 2006, in partnership with the SFPUC and the Bay Area Chapter of Les Dames d'Escoffier.

Informal Education: Public Engagement and Events										
	Sta	rt-up	Year 1		Year 2		Year 3		Year 4	
	2006-2010		2010-2011		2011-2012		2012-2013		2013-2014	
	#	#	#	#	#	#	#	#	#	#
	Events	People								
SAGE Major Events	3	200	1	150			2	320	3	1330
Volunteer Workdays	10	50	4	50	4	23	3	328	6	50
Custom Tours by SAGE			3	37	8	65	7	43	13	135
Tours and Events by Farmers			4	220	8	120	8	121	9	207
Totals:	13	250	12	457	20	208	20	812	31	1722

Field Days

Starting in the spring of 2008, and most years thereafter, SAGE has hosted Field Days for funders, buyers and key supporters. These events bring together stakeholders for the AgPark overall and for individual farmers for networking and an in-depth tour of the farmers' fields.

Custom Tours

SAGE and SAGE farmers host and organize a variety of special tours and activities as resources allow. Visiting groups have included: the Cupertino Senior Center; Alameda County Master Gardeners; Camp Edmo (a YMCA Camp); Close To Home speaker series tour; tour with Layma Murtaza (District Representative) from Assemblyman Bill Quirk's office; tour with the Center for Eco-Literacy; tour with Education Outside educators; and staff development day for East Bay Regional Park District. Individual AgPark farmers host tours and events as well, including: Terra Bella farm tours for its CSA members; Namu's Korean Harvest celebration with the Chuseok Festival; and Baia Nicchia's tomato breeding workshops.

Summary of Education Program Accomplishments

The charts above (see pages 37 and 39) summarize the accomplishments of the formal and informal education programs over the past five years, 2009-2014.

SAGE's evaluations (described in Evaluation Methodology section above) have provided a lens through which to assess the accomplishments of the program. Below is a sampling of recent (2013) evaluation results.

Elementary school teachers reported participation in the SAGE Environmental Education and Service Learning Program helped their students to:

• Appreciate the work that goes into growing food – 95%

- Feel more comfortable outside/in nature 91%
- Understand the importance of healthy soil and clean water 84%
- Increase their understanding about where food comes from – 92%
- Improve their observation skills 86%

Elementary school students reported the following outcomes of their participation in the program:

- 90% of students said the field trip to the Sunol AgPark helped them understand where their food comes from
- Almost 50% felt encouraged to eat fresh food and spend more time in nature
- For 50% of students, the field trip was their first visit to a farm
- Over 1/3 of students said they would like to work in a garden at home or cook healthy food

High school teachers reported the following results from their students' participation in the program:

- 100% of teachers strongly agreed that:
 - This experience helped my students appreciate the work that goes into growing food
 - This experience helped my students to feel more comfortable outside/in nature
- 66% of teachers strongly agreed that:
 - This experience increased my students' understanding of organic farming practices supporting healthy habitats and clean water

In addition to numeric evaluation results, SAGE assesses the accomplishments of the education program qualitatively through the direct feedback of teachers and students.

The following is a sampling of recent (2013-2014) quotes from teachers about the program:

"We loved, LOVED harvesting the tomatoes! They tasted delicious too! Even the kids who don't normally like tomatoes still tried them!"

"It was very refreshing and calming walking around in the openness and between the mountains on the farm."

"They were so proud of their harvest."

"The pace was perfect, just what they need, time to enjoy their senses and just be in nature!"

"At the beginning, many of my boys didn't want to get their Air Jordans dirty; by the end of the day they didn't even mind and loved digging and getting dirty. They were so engaged in and connected with the land and animals! It was a wonderful experience for them!! Can't wait to return."

"I wanted my students to learn about their local food system, explore green careers, and provide a project for service learning. And YES, my expectations were definitely met."

"This ties into our standards in both science and social studies. For example, water cycle, life cycle, and irrigation. The lessons on watershed and on harvesting were both excellent."

"Teaches a good amount of team work, following directions, appreciation of all animals and insects, and encourages students to care about where their food comes from."

"Learning about water and water cycle, we have also been learning how to conserve water and resources. This trip will motivate kids to take care of our planet. These types of field trips are important to expose our kids to all the different things they usually only learn on paper. This makes it real."

"Students learned about differences between organic/non-organic, life cycle of plants and animals. This field trip gave them real life examples to deepen their classroom learning."

"The in-school program really helped the class

understand what to expect and got them excited about the field trip. Went beyond my expectations. The hands on/group work was impressive."

"Instruction was excellent... patient, kind, and knowledgeable. Perfect pacing. I hope to participate next year."

"I think actually 'doing,' not just learning about how something is done, was the most valuable educational experience that the students had."

The following is a sampling of recent (2013-2014) quotes from students about their participation in the program:

"I never planted plants or worked with plants much, so this was kind new to me. I like doing work which gets you dirty, and I learned new stuff and saw new things."

"I love Aspen and everyone else on the farm! It was very very fun and I love the activities we did and eating flowers and honeycomb (nature's bubblegum)! Everyone is so nice and I learned a lot! (P.S. I might want to become a farmer one day!)"

"I liked getting to simulate working in the fields so I can make a connection to what we are studying in my class."

"I learned how you could get rid of weeds, feed them to an animal, and get fertilizer back from the animal."

"I really enjoyed coming to this wonderful place and having a chance to harvest tomatoes and going on a scavenger hunt. I never knew that tomatoes can be all of those different types of colors. Thank you!"

"The most special thing about today was, we got to realize how healthy, fresh food is. It was basically an outside organic school."

Financials Overview

SAGE secured funding from several sources to cover the establishment and start-up costs of the Sunol AgPark including: \$100,000 from the Columbia Foundation; \$50,000 from the USDA Risk Management Agency; and \$15,000 from the San Francisco Foundation.

The SFPUC provided a one-time grant of \$65,000 towards development of the Management Plan and towards installation of the perimeter fence and an irrigation water distribution system. SFPUC continued their support with a \$64,300 grant to create the *Farming in the Watershed* Curriculum in 2009, commitment of an annual grant of \$65,000 from 2011 – 2015 to support educational programming, and \$25,000 toward the construction of an Outdoor Classroom in 2013.

In February 2007, SAGE entered into a contract with the USDA NRCS EQIP Program for cost-share funding for conservation measures on the AgPark over a three-year period extending through the end of 2009. The contract provided a 75% cost share to SAGE not to exceed \$18,701. As referenced in sections above, funds were used to establish a filter strip, including planting, pipeline and irrigation system costs, planting cover crops and performing erosion control measures on roadways.

The Financial Plan section of the Management Plan included a detailed budget projection for 2008-2015. This budget projection was based on the assumption that the farming and natural resource stewardship activities would be selfsufficient and the educational programs would be scalable depending on successful fundraising. This projection proved to be fairly accurate in terms of the self-sufficiency vs. grant-funded assumptions and in terms of the overall expenditures over the past six years. The main difference between the projection and actual six-year budgets was lower expenses for staffing and higher expenses for consultants. The main Education Program funder over time has been the SFPUC. Other private and public funders have supported the program at critical phases and junctures. They include: the Banbury Fund (now known as the Robertson Family Foundation), the American Honda Foundation, the Clorox Company Fund, the East Bay Community Foundation, the Clean Water Community Stewardship Grant Program, and the FruitGuys Community Fund. In addition, long-term SAGE funders such as the Newman's Own Foundation have provided indirect support to the Education Program via general support funding for SAGE.

In 2012, SAGE received a three-year Beginning Farmer and Rancher grant in the amount of \$207,000 in partnership with the ACRCD. SAGE's share of \$92,250 was expended primarily on farmer training, both one-on-one technical assistance and workshops, all of which directly benefited the Sunol AgPark farmers.

A detailed chart of the Sunol AgPark's financial overview from 2005-2014 can be found on page 43.

Assessments and Lessons Learned

Overall, SAGE believes that the Sunol AgPark is a great success. As envisioned, the Sunol AgPark has become "an entity that integrates sustainable agriculture, natural resource stewardship, and public education about the agricultural, natural, and cultural resources of the Sunol Valley."

The guiding principles for the AgPark have remained constant and are still relevant:

- Land access and farming opportunities for multiple small farmers whose production, marketing and education activities support local food systems.
- Protection and enhancement of the natural resources of land, water, and habitat on the site

Sunol	Ą	gPark F	Financia	ls 2005	- 2014	(Fiscal	Year Ju	uly 1 - J	June 30))	
		2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	TOTAL
Individual & Corporate Contributions			\$2,469	\$846		\$240	\$2,500	\$1,000		\$5,612	\$12,667
Foundation/Agency Grants & Contracts	а										\$-
General Program and Start-up		\$50,000	\$65,000								\$115,000
Education				\$74,611		\$46,951	\$90,773	\$122,145	\$120,131	\$74,107	\$528,718
Farming			\$40,807				\$4,000				\$44,807
Natural Resources				\$4,050	\$9,393	\$4,138	\$8,084	\$9,247	\$7,134		\$42,046
Farming - USDA BFR Grant								\$15,058	\$18,965	\$32,227	\$66,250
Ed Program Service Fees						\$100	\$447	\$3,670	\$8,906	\$6,332	\$19,455
Farmer License & Water Fees	b	\$4,345	\$13,353	\$29,300	\$50,034	\$29,775	\$25,588	\$30,839	\$28,427	\$19,425	\$231,086
Total Income		\$54,345	\$121,629	\$108,807	\$59,427	\$81,204	\$131,392	\$181,959	\$183,563	\$137,703	\$1,060,029
Education											
Salaries & Related Expenses						\$18,119	\$28,171	\$30,854	\$35,991	\$25,290	\$138,425
Contract Services/Infrastructure	с				\$2,440	\$15,101	\$25,989	\$17,108	\$41,623	\$44,612	\$146,873
Non-Personnel Expense						\$926	\$2,472	\$3,598	\$5,784	\$3,267	\$16,047
Facility & Equipment								\$976	\$900	\$1,740	\$3,616
Travel & Field Trip Buses					\$480	\$1,205	\$4,006	\$8,933	\$6,197	\$3,391	\$24,212
Total Education Expenses		\$-	\$-	\$-	\$2,920	\$35,351	\$60,638	\$61,469	\$90,495	\$78,300	\$329,173
Farming (incl. start-up)											
Salaries & Related Expenses		\$20,130	\$27,463	\$28,967	\$35,602	\$18,119	\$15,452	\$11,936	\$14,397	\$16,277	\$188,343
Contract Services/Infrastructure	d	\$8,108	\$23,123	\$48,638	\$10,196	\$1,795	\$5,363	\$2,523	\$3,921	\$15,083	\$118,750
Non-Personnel Expense		\$1,036	\$39,063	\$17,936	\$2,799	\$4,037	1366	\$675	\$18,702	\$2,616	\$88,230
Facility, Equip. & Water Payments	е		\$16,048	\$8,675	\$13,556	\$830	\$1,021	\$(34,917)	\$17,778	\$14,507	\$37,498
Travel & Meetings		\$1,684	\$3,548	\$5,004	\$4,512	\$952	\$515	\$661	\$431	\$1,455	\$18,762
USDA Beginning Farmer Grant								\$15,058	\$18,965	\$32,227	\$66,250
Total Farming Expenses		\$30,958	\$109,245	\$109,220	\$66,665	\$25,733	\$23,717	\$(4,064)	\$74,194	\$82,165	\$517,833
Natural Resources											
Salaries & Related Expenses						\$752	\$1,142	\$1,163	\$898	\$921	\$4,876
Contract Services					\$792	\$5,000	\$2,723	\$2,828	\$2,763	\$634	\$14,740
Non-Personnel Expense					\$917	\$2,801	\$3,742	\$4,605	\$5,990	\$1,578	\$19,633
Facility & Equipment			.		\$688	\$200	\$200	\$200	\$200	\$200	\$1,688
Travel & Meetings					\$515	\$126	\$165	\$150	\$150	\$195	\$1,301
Total Natural Resources		\$-	\$-	\$-	\$2,912	\$8,879	\$7,972	\$8,946	\$10,001	\$3,528	\$42,238
Admin/overhead	f	\$5,868	\$20,975	\$20,970	\$13,919	\$13,433	\$17,727	\$12,739	\$33,540	\$31,487	\$170,659
TOTAL AgPark EXPENSE		\$36,952	\$130,220	\$130,190	\$86,416	\$83,396	\$110,054	\$79,090	\$208,230	\$195,480	\$1,060,029

a. Approximately 40% of the income came from SFPUC grants.

b. In FY 2008-09 some farmer land and water payments were made for two fiscal years; water rates were exceptionally high, prior to new negotiated rate.
c. Education contract services expenses include contract educators and contract for construction of Outdoor Classroom

d. Farming contract services expenses include technical assistance contractors and infrastructure and development (e.g. irrigation system, fencing, roads, ramada, etc.)

e. In 2011-12 SFPUC contributed towards past infrastructure improvements by way of a water credit thus the (\$34,917)

. Overhead costs include: insurance, phone, office rent and expense, and director and admin staff time

and, as feasible, in the environs.

- Experiential learning opportunities for multiple audiences related to the farming operations, Alameda Creek watershed, local ecology, and the agricultural and cultural history of the area .
- Management of the AgPark as a collaborative, sustainable system that is economically viable, ecologically sound, and provides value for all participants – the farmers, the Sunol community, the SFPUC and SAGE, collaborators, and Bay Area residents.
- Demonstration of the feasibility of the AgPark concept by creating a working model

The long process of launching, implementing and managing the Sunol AgPark has brought both successes and challenges from which SAGE has learned. Following is an overview of general successes and challenges, with more detailed discussion of specific lessons learned related to the Farming and Education components of the AgPark. Overall, SAGE has learned that implementing and managing the Sunol AgPark requires ongoing responsiveness, creativity, problem-solving and adaptive management.

General Assessment

<u>Successes</u>

The Sunol AgPark has shown the basic AgPark model – based on land access for multiple farmers combined with public education and natural resources stewardship – to be adaptable, dynamic and resilient.

Challenges

The most significant challenge is intrinsic to the model and is the 'flip' side of the successes of integrating farming and educational activities. Integrating the two main functions of the Ag-Park – incubator/starter farm and agro-ecology educational program – is an ongoing challenge, especially in terms of staffing, funding and coordination. In most ways, the funding model has worked. The farming component was intended to be – and has been – self-supporting, following the start-up phase which required infrastructure development. As SAGE was awarded additional funding for the farming component, most notably a three-year USDA Beginning Farmer and Rancher grant (2012-2014), increasing capacity was primarily a matter of adding responsibilities to existing technical assistance providers and adding some coordination responsibilities to existing SAGE staff.

The education component was intended to be – and has been – supported by grants. While the annual education grant from the SFPUC, starting in 2011, provided a baseline, this was not sufficient to both implement the program and to cover the salary of an experienced educator to manage and develop the program. Funding from other sources has fluctuated, which has led in turn to program gear-ups and gear-downs.

As noted in the staffing section above, staffing needs have changed over time. In the start-up phase of the farming component, a highly experienced and half-time farm manager was needed. In the start-up phase of the formal education program, a highly experienced and half-time education program developer was needed. SAGE was able to secure development funds for both these positions and for support consultants.

However, as the programs stabilized and significant start-up funding was no longer available, SAGE needed to merge the functions of farm/ farmer manager and education manager into one position. This was not always easy to do. It is a challenge to find an individual with both significant farming and education experience, as well as the skills to manage farmers and contract educators, to interact with many levels of partners, to do administration and to fundraise or at least support fundraising. That said, in the meantime, several adaptable, accomplished AgPark Site and Education Coordinators, supported by SAGE's lean but versatile administrative staff, have been able to fill management gaps, albeit sometimes on an ad hoc basis.

Other issues around staffing have included:

- Balancing and coordinating administrative work done in the office with onsite program work at the Sunol AgPark, given the distance of approximately one hour driving time between the SAGE office in Berkeley, California, and the AgPark in Sunol.
- SAGE's President being more involved in dayto-day management decisions than anticipated, due to insufficient AgPark management capacity.

Assessment of the Farming Component

Successes

Notable successes of the farming component of the AgPark include:

- The Sunol AgPark has continuously supported beginning farmers' operations since its inception, while becoming an important educational and local food resource for nearby communities.
- The Sunol AgPark farmers truly reflect the diversity of the East Bay urban community (in fact to a far greater extent than do the larger, more established farmers in Alameda County). In turn, the diversity of the farmers and the array of specialty and ethnic crops they grow have helped attract a broader audience to engage with the AgPark through visits and buying farmers' produce.
- Both land fees and water fees were considerably reduced for the farmers, as a result of lowered management costs and renegotiated water rates.
- The foundational documents, including the Master Lease, Farmer License Agreement and Farm Policies, continue to regulate AgPark management for the mutual benefit of the landowner, farmers and SAGE.

• The AgPark farmers have been deeply engaged in the education programs – directly as paid teachers, by coordinating with the education program staff on organizing 'farm chores' for the students, and overall by providing a real world, dynamic model of diverse, organic farming.

Challenges

The most significant challenges to the farming component have been and continue to be:

- Like many beginning farmers, AgPark farmers have experienced first-hand that small-scale beginning farming is a high-risk, low-return proposition. Even with the provision of technical assistance for business planning, production and marketing, SAGE has not yet been able to help farmers become, as had been hoped, truly 'profitable small farming enterprises.' The challenges seem to revolve around scale, amplified by start-up status. Small farming operations often have insufficient resources for planning, reasonable cash flow and needed equipment, and have to contend with local market outlets not being able or willing to handle somewhat inconsistent supply that needs to command best prices.
- The AgPark model aims to inculcate a spirit of cooperation among the farmer tenants. This has



Sunol AgPark workday

happened to some extent at the Sunol AgPark, but to lesser extent than anticipated. Cooperation and collaboration require thoughtful agreements and trust, both of which require more time and resources than struggling beginning farmers feel like they have. SAGE's efforts to broker such collaboration have worked where SAGE has taken charge, such as in the provision of shared inputs and organizing monthly farmer meetings, but not where SAGE has provided only guidance, such as for shared marketing.

- SAGE has reviewed and modified the Farm Policies on an annual basis as issues have emerged. However, it has been a challenge to consistently enforce all of the many provisions, which is management-intensive. To some extent, SAGE has had to settle for more informal, and less management-intensive, adaptive management.
- There is an inherent tension between wanting to support farmers who are simultaneously: profitable; from low-income underserved backgrounds; interested in promoting biodiversity; and engaged in selling to diverse local communities. Higher prices are better for individual farmers but less affordable for low-income customers. In this way, many of the large-scale issues and questions that confront realization of sustainable food systems play out in micro way at the AgPark; which may in fact be one of its great contributions.

Lessons Learned

SAGE's primary finding is, not surprisingly, that the success of the individual farmers is interdependent with the success of the AgPark overall. SAGE continues to strive to support the success of each farmer tenant, while managing the overall AgPark consistent with the long-term vision and principles.

Technical assistance has been a more critically important and complicated element of the overall project than was initially imagined because farmers have had less experience and/or mentorship than initially assumed. Technical assistance needs fluctuate depending on experience levels of farmers currently in the AgPark, and often shift when there is farmer turn-over.

SAGE has also found that economic viability is somewhat subjective. Farmers who are trying to make their livelihood from farms of just a few acres, need to get all elements right: sound planning for high-value crops, assured markets, skillful and timely production methods, appropriate equipment or access to leased equipment/ tractor services, sufficient cash flow for income fluctuations, and trained and committed labor. This is asking a lot. Farmers who want to make their small acreage farm a supplemental income or a 'learning farm' still need to generate enough income to justify the effort.

Assessment of the Education Component

<u>Successes</u>

Notable successes of the education component of the Sunol AgPark include:

- The education programs have successfully engaged a broad and diverse audience with a focus on school groups from low-income communities. (See Summary of Accomplishments in the Education section above.)
- Teachers and students have overwhelmingly shown their support for the hands-on and cropfocused elements of SAGE's educational programming. Students seem to reap a real sense of accomplishment and pride through harvesting activities especially. Students feel good about supporting the farm and eating fresh food off the farm that they picked themselves.
- On-farm educational programming seems to be successful at providing students with a better understanding of why plants have been so important to people around the world and over time, not just for food, but also for medicine, fiber, shelter and cultural retention/ritual. Students have learned about places of origin of different plants and start to connect certain foods they commonly eat today to places of

origin, considering how and why these foods were chosen to move along with the population (e.g. nutrition, seed stability over long journeys). These conversations help students connect present to past.

- The scenic location (creeks, riparian habitat, visible oak woodlands on the hills) and plentiful wildlife (birds, insects) of the Sunol AgPark has helped students understand that food and agriculture are part of and connected to larger natural systems. Seeing wildlife and being in nature have consistently been ranked as favorite experiences in evaluations. In addition, the rural nature of Sunol has probably helped make this experience stand out from the urban environment these students are more accustomed to.
- To deal with transportation challenges, SAGE negotiated a transportation contract with Michael's Transportation to reduce the cost of chartering buses for the program. This reduced the cost of transportation by approximately \$200 per bus and made the program available to a number of schools that could not previously arrange affordable transportation. For many schools, SAGE also covers bus transportation from grant funds.
- Interaction with farmers has been considered one of the main 'pluses' of the Education Program. Involvement with the Education Program in turn benefits farmers because SAGE pays farmers for their teaching time, thus providing modest supplementary income.
- Songs and interdisciplinary offerings were popular, especially for the younger grades.
- Public outreach programming and events have reached a large and diverse cross-section of the local community.
- Internships and job training have the capacity to greatly influence young people who are interested in potential careers in agriculture, both by

increasing their knowledge base and by helping them see that farming is a business that requires a broad set of skills, not just agricultural skills.

• Large and diverse audiences for events such as the Harvest Festival have shown that there is a real desire among a broad cross-section of the Bay Area community to connect with farms and farmers in the area and to experience hands-on, informal agriculture education.

Challenges

The most significant challenges to the education component have been and continue to be:

- Developing a sustainable education program is difficult given variable external funding. SAGE found that it had to be able to quickly ramp up and ramp down educational offerings depending on grant funding. This was sometimes at odds with the needs of educational programming, which requires planning, lead time and connections built over time with individual classroom teachers, schools and even districts.
- Certain coordination and consistency issues were mainly due to the lack of a single, longterm, full-time or nearly full-time staff person dedicated to the Education Program. It was often thought that one staff person who could oversee all details of both education programs, the internship program and public outreach events, as well as teach, was the answer. However, dedicated long-term funding for the program was never plentiful enough to guarantee this position for more than a year or two at a time. While many qualified and capable contract employees have helped fill gaps, it is difficult to establish "ownership" of the program without a dedicated staff person. If the program had enjoyed substantial long-term funding, it might have been even more successful, especially YBNA, the more complex high school service learning element.
- In general, SAGE has used contract educators

who are already familiar with environmental or farm education and therefore does not invest in additional training. While this is cost effective, it can present barriers to addressing deeper goals of students having authentic and transformative experiences, increasing the diversity of teaching staff to better reflect the diversity of students, and most effectively reaching underserved students.

- For the 'farm chore' education program component, it is a challenge to coordinate with the farmers' schedules (avoiding busy farm times), while trying to engage visitors in enjoyable farm activities (that also help farmers). The education program must also avoid risking damage to valuable produce when teaching a child to pick heirloom tomatoes or fragile strawberries.
- For the Youth Bridging Nature and Agriculture Program, although students requested an overnight experience, the year that SAGE included an overnight at Camp Arroyo as part of the program, attendance for the overnight was low. This was blamed on a number of factors, mainly the students' schedules. It was decided not to pursue another overnight, as it falls outside the scope of the program.
- Another challenge SAGE has faced in developing the YBNA program specifically is in recruiting green career mentors who reflect the diversity of the target student population.
- SAGE has needed to tailor already existing curriculum to the new Common Core standards.
- Given the 30 to 40-minute drive time and lack of public transportation from nearby urban centers to Sunol, transportation has been an issue, both in terms of affordability and accessibility. While SAGE has found ways to deal with transportation challenges for school groups (through a negotiated agreement with Michael's Transportation), it is an ongoing difficulty for

individuals who would like to be involved as volunteers or interns but do not have easy access to a car.

- Heat was a common complaint from both teachers and students; thus, SAGE installed the open-air, shaded classroom with picnic benches inside where classes can meet even during hot or (less common) rainy weather.
- Given the diversity of SAGE's target population, communication materials, especially those



Student field trip orientation (2011)

for parents – such as permissions slips and notices about preparing for hot weather, as well as take-home information – have to be prepared in a number of languages.

• SAGE has struggled to get comprehensive and timely evaluations back from teachers whose students participate in the Education Program. In response, SAGE implemented a Teacher Contract that clearly spells out the expectations of teachers, including that they fill out brief evaluations. Teachers are required to sign the Teacher Contract before their students receive educational programming.

Lessons Learned

Significant findings for those who are considering involvement in similar education programs include:

- The importance of qualified and experienced educators who are delivering the educational material cannot be overstated.
- It is critical to partner with individual classroom teachers but also, to get to a larger scale, with schools and even districts.
- It can be difficult working with classroom teachers because of the many pressures on their time and the restrictions of the set curriculum. Thus, it is necessary to have clear communication, such as through a Teacher Contract, and programs that directly relate to curriculum.
- State standards shift, and curriculum must shift accordingly.
- It is critical to have adequate, clear and consistent communication between administrative and program staff, contract educators, classroom teachers, school and district officials, students and parents.
- It is ideal though not always feasible given financial realities – to have dedicated, long-term Education Program staff to manage the program day-to-day while also taking 'ownership' of the program's future, dealing with challenges, building relationships and growing the program over time.
- The scale of the formal education program is limited by the facilities available, the seasonal nature of both farming and education (the majority of educational programming happens in the fall and the spring), the engagement of the farmers, and the hands-on orientation of the education program. For example, the more 'hands-on' the education programming is, the more likely that numbers will need to be capped in order to not interfere with the farming businesses also run on site. Thus, SAGE's YBNA program, with its many hands-on elements and multiple site visits, probably could not grow exponentially from its current size of 100-150

students per season.

- Given the popularity of the harvesting and tasting elements of the on-farm education, SAGE has thought that allowing schools/students to take harvested food home would be popular with students and also farmers; however, this would require securing additional funding to pay farmers.
- Logistical challenges transportation snafus, lack of set-up time, weather such as excessive heat, cold, rain or wind, not enough bathroom facilities, or not enough of the correct supplies – can very much impact what students learn and their overall perception of the day. Thus it is important to have proper facilities, supplies and organizational methods, including back-up plans and structures for weather and transportation issues that inevitably arise.
- When a program spans a wide range of ages, activities and vocabulary need to be tailored to grade level. Some activities are more easily adaptable between grade levels than others. SAGE has found that its scavenger hunt activity is very adaptable between grade levels as well as being quite popular with students.
- Similarly, lessons need to be adaptable depending on the season, what's being grown and the stage of growth of the crops (planting versus harvesting).
- For in-school lessons, some classroom teachers prefer pre-lessons, to prep the kids for their field trip, while others prefer post-lessons, to drive home lessons learned on the farm. Some teachers appreciate the option to do both, in addition to an on-farm field trip.
- SAGE suggests having an active, thriving compost pile on site so that students can explore soil teeming with bugs, worms, fungi, etc, to illustrate the live components of soil without potentially causing issues for farmers.



Beginning Farmer and Rancher Dinner (2014)



Shawn Seufert with BFR workshop attendees (2013)

Reflections from Jim Leap, Sunol AgPark Farm Advisor:

"There are certainly many unique challenges to mentoring beginning farmers at the AgPark. I think the some of BFR funded workshops provided a great opportunity to get into detail on the three topics (weeds, irrigation and soils) in a setting with lots of participant interaction and questions - both from the public and from the AgPark farmers. The workshops seem like a much better use of time as opposed to meeting one-on-one with farmers working through specific issues. If there are funding opportunities in the future for farmer education at the Ag Park I think creating more opportunities for group discussion/learning with all of the AgPark farmers at the table would be a valuable use of time and would go a long way towards creating a greater sense of community at the AgPark.

"I think overall the farmers were receptive to mentoring but I was also surprised that they didn't take greater advantage of what was offered. My sense is that there is a certain level of pride, especially with the longer term AgPark tenants, that tends to create a barrier to new information.

"It is really hard to pin down the challenges associated with farmer education at the Ag Park but one of the biggest challenges is the fact that there seems to be minimal interaction/communication between all of the AgPark farmers. Information sharing between farmers within such a small and relatively isolated community of growers is critical for their success and hopefully this aspect can be improved upon over time.

"Another serious challenge in providing advise to the beginning farmers at the AgPark is that, for the most part, the farmers have very limited access to tractors, tools and implements for what I would call "proper" soil and weed management. Most of the AgPark farmers are on such limited budgets that suggestions I provide - as a mentor - related to good weed, soil and crop management are impossible for them to implement."

The Farmer Perspective



n its first nine years (2006-2014), the Sunol AgPark has been home to twelve farming enterprises. These farms have ranged in size from ¹/₂ acre to twelve acres and have stayed at the AgPark for various terms, with one founding farm continuing at the AgPark to the present. These farms represent a variety of types, including oneperson businesses, family farming operations, enterprises associated with non-profit community organizations and other partnership models. Over the past nine years, a wide range of organic crops have been grown at AgPark, such as Albion strawberries, Blush tomatoes, Berbere peppers, eggplants, okra, figs, melons, long beans, and winter squash to name just a few. The diversity of the crops grown has reflected the diversity of the farmers and farming operations.

As the AgPark has matured, the mix of participating farmers has shifted, and the crops produced and markets served have changed. The great majority of the AgPark's acreage is licensed by individual farming enterprises, and the farms, along with their unique people, crops and markets, comprise the heart of the AgPark. At the same time, the AgPark as a whole is greater than the sum of its parts, and one of the most unique features of the AgPark is the diversity and dynamism represented by multiple organic farmers sharing common infrastructure and farming in close proximity to one another. As the composition of the individual farms has changed over time, the look, feel and reach of the AgPark has evolved as well. Yet, despite the dynamic nature of its farming community, the AgPark vision has remained constant through the years. Like a complex system, the AgPark is greater than the sum of the individual farms, while its success is also in large part determined by the success and sustainability of its individual farms.

This section describes the farmers and farm operations, past and present, of the Sunol AgPark, and provides an overview of the farmers' experiences and lessons learned. Longer profiles are provided for the AgPark's multi-year anchor tenants, present and past. Shorter profiles are provided for the farmer tenants who started farming at the AgPark in 2014 and for two former small-scale operations. A section on transitioning farmers was added at the end of 2014 (as this publication was being finalized). This section includes reflections from two farmers who decided to leave the AgPark and brief profiles of several prospective farmers who will likely join the AgPark community.

The Chapter ends with a summary of the key benefits and challenges of farming at the AgPark, a living model entering its ninth year. This section highlights some of the aspirations and plans of the current farmers as they look toward the future. These farmers' stories are shared in the hope that they may inform other farmers who are considering being part of projects similar to the AgPark.

Current AgPark Farmers

Baia Nicchia Farm

Farmers: Fred Hempel and Jill Shepard Years at AgPark: 2006 to the present Current Acreage: 6 acres

Baia Nicchia Farm was a founding tenant of the Sunol AgPark, starting in the summer of 2006. The farm's acreage and crops have changed over time. Currently the farm is on around seven acres and specializes in squash blossoms, winter squash, herbs and specialty tomatoes.

Getting Started at the AgPark

Baia Nicchia coowner Fred Hempel came into farming from the perspective of a scientist. With a PhD in plant biology, Fred had worked in the biotech industry for some time, when he started farming in disparate plots – mainly in backyards and community gardens in Hayward, California. Fred set up a nursery and greenhouse in his own



Fred Hempel, Baia Nicchia Farm

backyard, where he started breeding tomato varieties. When he heard about land in Sunol becoming available – the soon-to-be established Sunol AgPark – through California FarmLink, Fred decided to quit his office job and pursue farming full-time. Baia Nicchia, started by Fred Hempel and Jill Shepard in 2006, was originally established on a half-acre to test out tomato trials at the new AgPark site. The first year was mainly for experimental and breeding purposes, not geared towards production. After a successful trial period, Baia Nicchia increased acreage in order to produce crops for wholesale markets and local restaurants. Still a prominent farm at the AgPark, Baia Nicchia is now in its ninth year farming on the land.

Changes in Operations

Baia Nicchia's acreage has fluctuated over the years. After the first year, the farm expanded operations onto seven acres, then up to 12 acres in 2012. Currently, Baia Nicchia farms on 6.8 acres at the AgPark. The farm employs two to three full-time equivalent farm employees as well as seasonal labor.

Baia Nicchia means "Bay Niche" in Italian, and the concept of finding and filling a niche – through its specialty tomato breeding and other artisan niche farm products – is a focus of the farm. Along with developing such a niche, has come tailoring production to be more efficient and profitable. Fred states, "We are consistently moving to growing fewer crops – in general those with better margins. We are also selling to fewer and fewer customers, to increase efficiency."

Crops and Cultivation Practices

Baia Nicchia has focused its production on tomatoes, peppers and squash. In addition, the farm grows edible flowers and leafy greens. Squash blossoms have emerged as a high value crop for restaurant sales, and the farm anticipates this product will continue being a prominent value crop.

Baia Nicchia also breeds tomatoes and markets new tomato varieties under the "Artisan Seeds" brand. Tomato seedlings have been a steady farm product, with increased marketing of seed through their own store, Johnny's Selected Seeds and AP

Whaley Seed Co.

Through its online herbal tea store, Grey Dog Teas, Baia Nicchia sells artisan teas. At the Ag-Park, Fred and Jill grow a variety of herbs for the teas, including multiple varieties of mints.

Another focus of production has been peppers. Baia Nicchia grows several types of specialty peppers, with Ethiopian frying peppers, called Berbere, being one of their biggest products. Menkir Tamrat, a native Ethiopian, introduced Fred to the Berbere peppers as well as to specialty Ethiopian cooking greens (similar to chard) that are used to make Gomen, a traditional Ethiopian dish.



Markets and Community Engagement

In Baia Nicchia's first trial year at the AgPark, the tomatoes grown on the half-acre were sold at subsidized prices to Hayward public schools. Starting in 2007 and after the first year of full production, Baia Nicchia sold to local restaurants, catering businesses, and farmers markets in Berkeley, Alameda, San Mateo, and Menlo Park. The farm also still donated much of its produce to public schools and non-profit organizations, illustrating Baia Nicchia's initial and continued support for aspects of agricultural education.

Local restaurants, which value flavorful and beautiful heirloom tomatoes, continue to be a main market for Baia Nicchia. Increases in production brought new marketing opportunities with wholesale buyers and grocery stores. In 2013, Baia Nicchia sold 70% of its produce to wholesale markets. However, local markets continue to be a strong focus for the business and ideals of Baia Nicchia. The farm started a 'pop-up' market to sell right out of Sunol and is still engaged in promoting local sales of its produce. Donations and community involvement are also important. The farm has engaged volunteers over the years through various intern programs and farm education outreach.

In 2013, Fred also started marketing his tomato seeds online. Baia Nicchia runs its own online seed store – www.growartisan.com. In addition, Johnny's Selected Seeds, a national seed selling business, picked a number of Baia Nicchia's tomato seeds to sell.

Challenges and Solutions

Baia Nicchia has faced various challenges in its farming production. Starting out at the AgPark as a new farmer, one immediate and critical challenge was to establish a greenhouse space to breed tomato seedlings. As Fred stated in the 2006 year-end evaluation, "The viability of our business will depend on us being able to erect two hoop houses. Without these in place by February, we will be unable to meet the increased demand for seedlings during the spring season." While the greenhouse was not erected on that timeline, Baia Nicchia was able to adapt its business plan for 2007 and erected a greenhouse the following year.

Bad tomato years have been an issue for Baia Nicchia, as tomatoes have generally represented a large focus of their business. Tomato blight hit the fields one year; to address that particular problem going forward, Baia Nicchia started to more regularly rotate other crops with the tomatoes. Another challenge was due to market conditions: one year tomatoes flooded the market and the farm had to cut production due to this excess in supply.

Other farming challenges and risks have included irrigation issues, animal pests such as ground squirrels and site-wide weed problems. Irrigation presented a problem one summer at the AgPark when water pressure was low for a few weeks and all farmers had to manage their farms with decreased water access.

Success and Opportunities

Tomato breeding, which combines Fred's drive for farming with his prior scientific background, has been a main reason for Baia Nicchia's success. The experimental breeding and seed saving has expanded to a point where the farm's heirloom tomatoes are in demand from chefs throughout the Bay Area. The heirloom tomato niche is also of interest to scientists, academics and food-lovers.

Development of multiple niche products and multiple marketplaces helps with the stability of Baia Nicchia's business. Becoming certified organic, which happened in 2008 with the help of SAGE, was a boon for business.

Collaboration with other farmers at the AgPark provides multiple benefits and opportunities, such as sharing greenhouse space and the potential for co-marketing crops. As Fred said in the 2008 year-end evaluation, "I think we now have a good number of small farms that can work together in a productive way." Fred's knowledge and willingness to mentor beginning farmers are considered to be a major resource by many of the other AgPark farmers.

Baia Nicchia considers the marketing and branding that takes place through the Sunol AgPark and its education program and public outreach events a plus for their business.

Regarding financial sustainability, Fred shared the following reflection in 2014:

"This is the first year that Baia Nicchia has truly been paying its bills in full, without relying on investment from owners or others to make up a gap between expenses (including rent and other expenses for Fred and Jill). The farmproduction side of the business has been able to consistently produce so that there are pickups six days a week by our wholesale buyer. Our wholesale buyer prioritizes our produce, in return for access to the new varieties that we create or otherwise come across. It has taken much longer than expected, but we have learned how to spread crops over seasons, and how to choose crops that are realistic for each season.

"Finances are still tight, because we are still burdened somewhat with residual debt pay-down, but overall the future looks bright. Fortunately, our seed business (Artisan Seeds) has begun to pay off, and we are receiving quarterly royalty checks that should help our bottom line more and more in the coming years. We released seven varieties with Johnny's Seeds this year, and the buzz about them is good. All expectations are that many more seeds will be sold in coming years.

"It is a sobering thought, but our seed business is probably what will determine whether or not we put away a retirement nest egg over the next ten years. Based on eight years of experience fulltime farming, and on listening to other farmers (even ones that appear to be successful by many measures) farming is a very tough way to make a living when it is more than a hobby and less than a corporation."

Relationship to SAGE and the AgPark

Baia Nicchia is the only current AgPark farm that has been on the land since the AgPark's start in 2006. The AgPark has provided a space for Baia Nicchia to grow its produce, develop its tomato varieties and crops and pursue an innovative niche in artisan and organic farming in the Bay Area.

Baia Nicchia highly values its partnership with other Sunol AgPark farmers and with SAGE. Of particular benefit are:

- •The education program and partnerships it fosters between farms and schools, as well as interns
- •Public outreach and events such as the Harvest Festival, and associated marketing and branding
- •Mentorship, networking and connections

- •Technical assistance and leadership around pest management, site-wide planning, soil tests, etc.
- •Infrastructure such as irrigation set ups.



Advice for other beginning farmers

"Although they may not initially realize it, farmers are entrepreneurs, and for entrepreneurs to be successful, they must be ready to risk failure. There are no turn-key "jobs" for entrepreneurs, including farmers. There are no guarantees. Most importantly, if you can view the long hours needed to grow and market farm products as getting to work 24/7 on your gardening hobby (without having to "work"), you are probably on the right track, working on the right project. And hopefully you will learn what you need to before the money runs out."

Feral Heart Farm Collective

Farmers: Justin Valone, Sophie Bassin, Matthew Tistayane, and Aaron Dinwoodle. Years at AgPark: 2014 to the present Current Acreage: 1 acre

Feral Heart Farm Collective joined the AgPark in 2014 on one acre of land. They are a farming group comprised of four Bay Area farmers who are focusing on sustainably growing a large diversity of crops and connecting their farming to the greater Bay Area social and food justice movements.

Background

The four Feral Heart Farm Collective members -Justin Valone, Sophie Bassin, Matthew Tistayane, and Aaron Dinwoodle - met through Oaklandbased organization Phat Beets Produce by working on the Pinole Incubator Farm Project together. The project was suspended, but the group decided to continue farming together when land at the Sunol AgPark became available.

Food justice, a large focus of Phat Beets Produce, continues to be a mission for Feral Heart Farm Collective. "We are committed to making healthy food affordable and accessible," says Justin. The farmers come from a range of prior farm experience: Aaron has nine years in the farming world, Sophie spent five seasons working on small-scale farmers, and Justin has an extensive agriculture and urban gardening education background. Justin worked extensively in running after-school garden programs in San Francisco schools, led outdoor education trips at Hidden Villa and currently runs an urban agriculture program at University of San Francisco, teaching bio-intensive methods for agricultural production in home gardens and small farms.

Crops Grown

Feral Heart Farm Collective has focused on a diverse crop production plan, with early season brassicas, lettuce, potatoes, beets and carrots. Hot summer conditions in Sunol allow for tomatoes, peppers, eggplant, okra, beans, winter squashes, sweet potatoes and melons to be cultivated. They plan to also produce a small amount of mixed flowers, for both sales and to provide nectar and pollen sources to attract bees. The group plans to experiment with growing different vegetables for various ethnic markets around the East Bay, such as bitter melon, yard long beans, green amaranth and epazote.

Employees

Feral Heart Farm is managed by the four members that act part of a collective.

Market Outlets

One of their main market outlets is Phat Beets Produce, which runs produce stands, community gardens and a CSA program to provide fresh produce to underserved communities in North Oakland. Additionally, the farm wants to plant winter vegetables and crops specifically for seed saving, as Aaron has over nine years of seed saving experience and has taught numerous workshops on the subject.

Foolish Hens Farm

Farmers: Aspen Kvicala and Suzanne Allcroft Years at AgPark: 2013 to the present Current Acreage: 1 acre

Starting at the Sunol AgPark in 2013 on two acres and now downsized to one acre, Foolish Hens Farm is a diversified, organic farm that produces organic vegetables, cut flowers and pasture-raised eggs and chickens. Foolish Hens Farm is a CSA and farmers' market-based farm that also has been successful in establishing grocery partnerships.

Getting Started at the AgPark

Foolish Hens Farm founders Aspen Kvicala and Suzanne Allcroft met in 2011 during their apprenticeships at Hidden Villa, a nonprofit in Los Altos Hills dedicated to environmental and social justice education. At Hidden Villa they learned the basics of organic farming, CSA programs,



Aspen Kvicala and Suzanne Allcroft, Foolish Hens Farm

land-use issues, marketing, and other knowledge vital for a young farmer. "Hidden Villa was a really transformative place for me because I hadn't met a lot of people in the environmental education and farming world," Suzanne says. "It was a real 180 degrees from my city life. It's where I met a like-minded person, Aspen, and where we started networking. It was the perfect place to get a whole new perspective on farming and what was possible."

Their shared love of farming and desire to bring amazing and real food to the table inspired Suzanne and Aspen to start their own farming project. As the two aspiring farmers began looking for land, they discovered a host of creative land-use models, as well as numerous organizations that provided suggestions and leads on how to access land. When they found SAGE and the Sunol AgPark, Suzanne and Aspen jumped on the opportunity, although they were still unsure how they would finance their farm.

The financial advice and consulting of farmer support organization Community Alliance for Family Farmers (CAFF) helped them realize the necessary funding. The bulk of their initial farming venture came through grassroots support: a \$20,000 online fundraising campaign that was successfully funded through over 100 supporters. This campaign enabled Foolish Hens Farm to join the Sunol AgPark in 2013 and even helped them decide on what to name the farm, via online voting.

Aspen and Suzanne gained inspiration for starting and naming their farm from the traditional imagery and folklore of "The Fool." A fool is someone who walks their own path and follows their heart despite convention and expectation. He travels with vision and wonder, while at the risk of being naive or just plain crazy. Just like starting a farm, the fool can represent unlimited potential or, well, foolishness.

Changes in Operations

Foolish Hens Farm joined the AgPark in 2013, farming on two acres, and quickly built up their farming business. With the money raised via the online campaign, they obtained new assets for their farm and built a greenhouse, shade structure and a mobile chicken coop out of a recycled trailer. They downsized to one acre in early 2014.

Aspen and Suzanne pay themselves from farm profits, which are slim, and also both hold outside jobs. Aspen works 50% FTE as the AgPark Site and Education Program Manager. Foolish Hens Farm also relies on the help over 20 volunteers. In 2014, they started focusing more time to dedicated volunteer outreach, including bringing on an intern to help with volunteer outreach and coordination. They host volunteer days every other Saturday, where community members help with farm tasks such as weeding, seeding, planting and harvesting.

Crops Grown and Cultivation Practices

Foolish Hens Farm's primary crops are pastureraised eggs, meat bird chickens, sunflowers, cucumbers and basil, although the farm has grown over 30 different types of crops. Their flock of laying hens and meat birds are an important part of their business operation. The chickens are currently the only animals kept at the AgPark, besides beehives. Foolish Hens saw the benefits in expanding their laying hens and focusing on building their flower enterprise while honing in on a handful of crops that grow and sell well, looking towards such models for future seasons.

Markets and Community Engagement

Foolish Hens Farm believes in the power of agriculture and community. The farm is accessible to the public, through its volunteer days and on-farm workshops. Foolish Hens Farm cares about making food accessible to everyone and is developing partnerships with a local food bank and organizations that provide fresh food to low-income families in the area.



Foolish Hens Farm has marketed their products through its CSA program, local farmers' markets, direct sales and grocery store partner-

Suzanne Allcroft at New Leaf Market

ships with the nearby Whole Foods and New Leaf Community Markets.

Challenges and Solutions

The biggest hurdle Suzanne and Aspen faced was finding land. Once they joined the AgPark, getting the farm off the ground during the first year was a big challenge; they found production specific issues that are often a challenge for farmers, especially beginning farmers.

Bermuda grass, a noxious weed, presented a problem to AgPark farmers in 2013. Suzanne and Aspen reflected that getting a handle on the Bermuda grass was a big issue, and they didn't realize how bad it was until they started farming. The extent of this problem required a coordinated, AgPark-wide response, led by SAGE and its Farm Advisor Jim Leap.

Regarding other challenges, the Foolish Hens farmers shared the following reflection:

"In addition to weeds and the ever present threat of plant disease and unexpected weather, the financials of small scale farming have been a harsh reality to confront. Simply put, after our second year growing we have not been able to quit our jobs and work full time on the farm. There are opportunities for us to scale up or do a value added product with a few of our vegetables but the money coming in still would not afford us a steady enough paycheck to keep the farm afloat not to mention pay us enough to cover living expenses in the Bay Area.

"The eggs are a great value to the farm. Not only are eggs from an organically fed, pasture raised flock in high demand, the flock itself brings much joy and benefit to school children who come to the AgPark with their schools and to weekend events where members of the community can come interact with the chickens and ask questions about how to keep their own flock at home. Yet, again, we are not making a lot of money from egg sales. Predation and chickens pecking their own eggs have taken their toll on our overall egg production (especially with a flock so small, every chicken counts) yet even so at \$8/dozen, the cost of organic feed barely begins to be covered. Trying to figure out how to pay ourselves a salary, not simply just covering the costs of the farm, is the most critical threat to the viability and future of our farm."

Interpersonal dynamics and the culture of a place can be an issue in any collaborative work environment. At an AgPark, this can especially be an issue when farms are in flux, with new farmers joining and others closing or moving their operations out. It was challenging at first for Aspen and Suzanne to form solid connections in the AgPark community. They partially attributed that to the fact that all of the farmers work so hard and are focused on their farm business, but thought that there also might be a lack of investment in a community spirit. Another issue was a discrepancy between the investment and problem-solving culture of the farmers and that of the farmers' employees.

Successes and Opportunities

Foolish Hens Farm's eggs are their most popular item. The eggs are acclaimed by customers as delicious, and the memorable Foolish Hens name has been a good marketing tool for this product.

As two young women farmers, they represent "the face" of a new crop of diverse beginning farmers.

Whole Foods and New Leaf Markets have seen this as a marketing opportunity, using the Foolish Hens name and images of Suzanne and Aspen prominently when they sell Foolish Hens products and as part of an overall effort to promote sales of food from local growers.

Still fairly new farmers, Aspen and Suzanne have been positive and looking towards the future, strategizing about how to increase sales and the best ways to specialize their crops. In addition, Foolish Hens Farm's expansion of its volunteer program and public engagement efforts has been a critical part of the farm's mission from the outset.



Aspen Kvicala collecting eggs from her chickens (left) Cut Foolish Hen flowers (right)

Relationship to SAGE and the AgPark

Aspen and Suzanne are passionate about networking with other farmers and organizations that support a local, vibrant food system and provide resources for new farmers to access land and start businesses. Aspen says, "I love the AgPark model, love being a part of it, and see it as a model for the future. I see the AgPark in five years, as a central gathering point, maybe a hub for a bigger network that will continue to grow and that I will be part of. Definitely want to keep farming, would love to expand and pay ourselves and workers more."

Fellow farmers at the Ag Park have been a valuable resource. "Sibella (President of SAGE and founder of the Sunol AgPark) has done a really good job creating this space where people can interact and collaborate," says Suzanne. Kristyn Leach of Namu Farm has taught them about no-till farming methods, while Shawn Seufert of Terra Bella has helped with tractor work and discussed having them participate in his CSA. "It's nice to not be alone when you're farming," she adds. "SAGE has created this great agricultural community. If we'd found some far-flung land to lease, we wouldn't have had that."

Happy Acre Farm

Farmers: Helena Tuman, Matthew Sylvester Years at AgPark: 2014 to the present Current Acreage: 1 acre



Happy Acre Farm is run by Helen Tuman and Matthew Sylvester, who started their first year of independent farming at the Sunol AgPark in 2014. The two hope to become local producers and marketers of

Matthew Sylvester & Helena Tuman, Happy Acre Farm

specialty products, and to sell their farm products and goods to local restaurants, farmers markets and through a 50 member CSA.

Background

Helena Tuman and Matthew Sylvester are natives to Oakland. Helena discovered her love of farming while living in Hawaii, and brought it home with her to give back to her community in Oakland. She became involved with building urban gardens, coordinating high school garden programs and spent the last three years working for Shooting Star CSA in Suisun Valley. She also owns a business specializing in organic jams called, Jam On!

Matthew Sylvester came to his love for farming through the food justice movement in the East

Bay. He encouraged and assisted in the creation of urban farms, office farms and school farms, and is a strong advocate for agricultural education in

his community. The passion the two have for nourishing the local food movement through organic produce and products has steered them in the direction of organic farming as their contribution to bettering their home of the East Bay. With the philosophy: "We prefer to be plant positive rather than pest negative. We strive to



Helena and Matt harvesting basi



give plants the best possible growing environment so they can thrive and we can provide you with delicious produce." Helena and Matthew are making their footprint in the food movement.

Crops Grown

Happy Acres Farm grows more than 80 varieties of fruits and vegetables. Produce grown includes watermelons, cantaloupe, broccolini, cabbage, basil, cilantro, parsley, green onions, lettuce, kale, chard, potatoes, bulbing onions, summer squash, cucumber, corn, winter squash, pumpkins, peppers, tomatoes, eggplant and flowers. Happy Acre Farm received CCOF organic certification in 2014.

Employees

2014 is the first year they had the farm up and running on one acre, with plans to expand to two acres in 2015. Matthew and Helena have been transitioning toward both working full time on their farm. They also receive help from a broad group of supportive volunteers.

Market Outlets

Happy Acre Farm's goal is to sell their goods at a certified farmers' market and small restaurants within the Bay Area, and to start a 50 member CSA in 2015.

Jellicles Farm

Farmer: Lalitha Visveswaran Years at AgPark: 2014 to the present Current Acreage: 1.5 acres

Jellicles Farm joined the Sunol AgPark at the beginning of 2014 on 1.5 acres. Lalitha focuses on producing Indian crop and herb varieties, as well as value-added products such as Ghee. The farm uses various sustainable production techniques,

mainly those in permaculture and bio-intensive schools of thought, and additionally draws from traditional Indian cultivation practices. The farm also relies on Agro-Homeopathy remedies for



Jellicles Farm at the Sunol AgPar

healing plants and combating pest issues.

Background

Jellicles Farm is owned by Lalitha Visveswaran. Lalitha grew up on Indian food and was classically trained in French cuisine, but always knew that "food is ingredients." Upon her return home to California, it didn't take long for her to realize that the real gold of California was its soil and weather, every farmer's dream. She volunteered with a local ecology nonprofit, L.E.A.F (Local Ecology and Agriculture, Fremont) in her resident city of Fremont and was awarded a small plot to develop a Diversity Garden Project. Unsurprisingly, she found that plants from all over the world thrived and flourished.

Encouraged by this small success, she designed and installed a mixed fruit orchard, a lavender patch and a bee yard for a farm near Santa Rosa in Sonoma County. The young orchard is also a testament to the diversity of California. The farm now grows Jujubes, Mulberries, Pawpaws, Medlars, and Quinces, among other products. Jellicles Farm became part of the AgPark community in March 2014.

Crops Grown

Jellicles Farm grows vegetables including eggplants, peppers, beans and greens. A small portion of the farm is dedicated to growing vegetables for the Asian kitchen. The farm is also trying to grow Curry (sweet neem) leaves, Moringa (aka Miracle-Tree) leaves and herbs like lemon verbena, lavender, rose geranium, catnip, chamomile and za'atar, among others. The farm grows and sells flowers, such as marigolds, to make garlands for cultural and religious events. Part of the acreage is dedicated to developing a culinary and medicinal tea garden that incorporates healing herbs from Chinese, Indian and Native traditions. Lalitha also dedicates part of her acreage to test plots.

Employees

Lalitha manages Jellicles Farm primarily as an individual operation, and hires labor on a as needed basis.

Market Outlets

Jellicles Farm has a range of market outlets. Lalitha still provides her services as a private chef for some of her clients and caters vegetarian fare to small-scale events using Jellicles Farm's produce to stay true to the 'Farm-Table' credo. She also makes and sells hot chili salts, Indian dessert kits, herbal teas, Ghee (beurre noisette) as well as Sman (Middle Eastern goat's butter Ghee) as value added products. Jellicles Farm is a producer in partnership with Good Eggs, a business that connects local growers to consumers. Lalitha was the recipient of the Whole Foods Local Foodmaker Grant in 2014, won by popular vote. This social media based award earned Jellicles Farm a portion of proceeds from sales in the Fremont Whole Foods store on July 2, 2014, and represents an interactive and



Jellicles Farm produce

engaged partnerships that many of the AgPark farmers have pursued. Jellicles Farm also hopes to engage in direct sales through a farm stand in the future.

Namu Farm

Farmer: Kristyn Leach Years at AgPark: 2012 to the present Current Acreage: 1 acre

At the Sunol AgPark since late 2012, Namu Farm grows Korean crops using historic East Asian and modern organic and permaculture practices. The farm supplies San Francisco New Korean-American restaurant Namu Gaji and develops connections with the local Korean community. The farm's one-acre plot also provides significant bird habitat.

Getting Started at the AgPark

Growing up as an urbanite, Kristyn first connected to growing food by cultivating her own perilla, a Korean herb grown widely throughout the Korean-American population. She soon moved into the farming world, managing a lettuce farm for Paradise Valley Produce. This work, along with the mentorship of farm owner Dennis Dierks, provided Kristyn with extensive learning and hands-on training. Her background also includes experience in the restaurant world, where she worked as a cook at well-known Oakland restaurant, Camino.

Soon the Lee brothers, owners of San Francisco New Korean-American restaurant Namu Gaji and themselves Asian crop enthusiasts, were buying Kristyn's backyard-grown perilla. "I had never seen anybody get as excited about perilla as David Lee did. He had a lot of nostalgia about the herb," she says. Their arrangement led to a more formal collaboration in 2012, with Kristyn farming one acre at the Sunol AgPark dedicated to meeting Namu Gaji's demand for locally sourced, organic Korean herbs

and crops.

Kristyn's partnership with Namu Gaji has resulted in a strong connection to her Korean roots, and to the land that she farms:



Kristyn Leach, Namu Farm

"I wanted to grow something distinctly Korean and I sort of stumbled upon the seeds for perilla (known as deulkkae or ggaennip in Korean). It's a staple Korean herb. I brought some into Namu Gaji, a Korean American restaurant in San Francisco. And their response to it was magical. Now I farm for the restaurant. It's interesting how it's turned out, having been adopted away from Korea and raised out of my culture, now coming back to my roots through food. It's very validating."

Changes in Operations

Namu Farm has occupied one acre at the Sunol AgPark since 2012, and has no intention to increase its size. Five years from now, Kristyn still envisions farming on this same single acre, which is able to accommodate all the demand from Namu Gaji.

While the size of the farm hasn't grown, the investment in the land and its cultivation has. Kristyn started Namu Farm as a part-time, volunteer project. Within a year it became her full-time employment, and she started receiving a salary from Namu Gaji. The following year she was able to hire an additional part-time worker. A handful of volunteers have provided additional support.

Namu Gaji builds a strong relationship between its employees and the farm by requiring restaurant employees to spend time working on the farm. "It is part of our development in cultivating skills and awareness of our relationship with food. You don't look at produce the same way after you've grown it yourself," says owner Dennis Lee.

Crops Grown and Cultivation Practices

Namu Farm specializes in Korean crops and herbs. The farm grows about 30 different types of crops and harvests around 3,500 lbs a year. The focus on Korean crops is coupled with cultivation techniques based in historic East Asian organic practices. Many of Kristyn's cultivation techniques were drawn from the book Farmers of Forty Centuries and are used alongside techniques and philosophies from the permaculture and biodynamic movements.

Main crops include winter squash, tomatoes, melons, and eggplant. Kristyn grows two specialty pepper varieties, or gochi in Korean, three perilla varieties, burdock, Japanese mugwort, motherwort, okra, Korean black soybeans, among other crops that are used in Namu Gaji's intricate Korean dishes.

Markets and Community Engagement

Namu Gaji Restaurant is the main market for Namu farm products; the restaurant subsidizes the farm and finances the business. Growing for a single restaurant allows for innovation and creativity in Namu Farm's crops. Kristyn and Namu Gaji owner Dennis Lee brainstorm over crop and seed possibilities, and Kristyn enthusiastically





seizes opportunities to experiment with different crop varieties and learn about growing new ones.

In addition to growing for Namu Gaji, Kristyn has developed other relationships through the Namu Farm project. She has sold farm products to Camino Restaurant and Camino's chef acts as a mentor to Kristyn on topics of the purple radishes food and restaurant

Harvested herbs and Korean

world, illustrating how such marketing relationships can serve multiple functions for farmers besides solely providing an outlet to sell produce.

Namu Farm is also focused on developing connections with the local Korean community. The farm is collaborating on programs with partner social justice groups focused on seed saving related to cultural preservation. Kristyn has the goal to work with community organizations to provide discounted produce to organizations or low-income individuals. Namu Farm hosts an annual Chuseok Festival, or Korean Harvest Festival, demonstrating the farm's engagement with the Korean community and use of the farm as an educational, community building, and ecologically productive resource for the Bay Area, and particularly Korean and Asian-American communities.

Challenges and Solutions

Namu Farm has faced various challenges since the start. Starting off the project as a volunteer venture was a significant roadblock, as Kristyn had to work other jobs simultaneously. Limited infrastructure also posed a problem in the beginning, especially the lack of a greenhouse and storage space. Kristyn addressed these issues through leveraging her resourcefulness and the AgPark community, such as by using space in a fellow AgPark farmer's greenhouse until Namu was able to build their own greenhouse a year later.

The farm has also faced production challenges, similar to those faced by many beginning farmers on new land. Kristyn encountered problems with insects, weeds and using recycled potting medium. Responding to production challenges has required dedicated efforts on the part of Namu, the other AgPark farmers and the Sunol AgPark as a whole.

Farm site-specific problems such as detrimental potting medium were easy to address on an individual farm basis, but issues of insects and weeds pointed to more site-wide problems. Different types of insect management from all the farmers made dealing with certain insects a struggle. As Kristyn stated in a 2012 year-end evaluation,

"It's hard to maintain equilibrium when surrounded by folks with different practices and ways to deal with or acknowledge pests."

The issue of Bermuda grass weeds became a problem for all AgPark farmers by 2013. SAGE addressed this by developing, paying for and implementing an AgPark-wide Bermuda grass eradication plan.

Successes and Opportunities

With no desire to expand or move, Kristyn has been able to dedicate her energy towards building up the land's organic soil matter and fertility. Each year she has reported an improvement in the soil quality, and she aims to build up organic matter to twice of that required by organic certification schemes. The focus on hand tooling makes this soil quality apparent: "Especially since we make each bed by hand, I could really notice how the soil texture and quality felt and changed throughout the season."



Kristyn Leach, Namu Farm

Building soil organic matter has resulted in beneficial management practices such as incorporating indigenous fungal and microbial organisms into the soil, cover cropping and creating of wildlife habitat areas on her acre. The wild bird habitat on Namu's plot of land is especially noteworthy. These conservation and sustainable farming practices have ensured a robust and healthy farm, one that Kristyn hopes to sustain and maintain for years to come.

Kristyn's connections both inside the restaurant world and to local Asian communities have helped bring about the success of Namu Farm. Her relationship with Namu Gaji has allowed Kristyn to fully pursue farming, often spending more time in Sunol at the farm than she does in the urban East Bay, where she lives. Namu Gaji acts not only as a market for produce and a financer of the operation, but also as a co-producer and vital element in Namu Farm's operations. Kristyn closely collaborates with Namu Gaji on the crops grown for the season and the ways crops can be used in restaurant dishes. Experimentation and innovation is encouraged on both sides, and Namu Farm has emerged as a unique and compelling farm-to-table story for San Francisco and the Bay Area, as covered by various media. Namu Gaji's commitment to sustainably grown and locally sourced food also bolsters the goals of Namu Farm in maintaining a healthy and ecologically productive site.

Because of Namu's focus on Korean and Asian crop varieties, Kristyn has been able to find many opportunities in the Asian communities throughout the Bay Area. A main provider of her seeds is Kitazawa Seed Company, a company specializing in Asian crops. Many other seed varieties came directly from the grandparents of Namu Gaji's owners. Donating back to organizations that address the needs of Asian communities has presented a way to further connect the Namu Farm project, with its Korean heritage and traditional crops, to a larger context and engagement with healthy Asian produce and communities.

Reflecting on the benefits of her partnership with the Lee brothers and Namu Gaji, Kristyn states:

"Our relationship with the Lee brothers and Namu and their support, has given us the chance to farm in a balanced way that acknowledges the broader needs of our shared ecosystem. We hope to use our experience to engage in conversations with other small scale farmers on how we can develop innovative new economies that can lead to more integrity in our practices, and equitable relationships."

Relationship to SAGE and the AgPark

The Sunol AgPark presented an incredible opportunity for Kristyn and Namu Gaji Restaurant, as the perfect amount of acreage was available for the Namu Farm project.

Mentoring opportunities facilitated by SAGE and the Sunol AgPark bolstered Kristyn's previous experience. Fellow AgPark farmers, Farm Advisor Jim Leap and other mentoring opportunities such as California FarmLink's financial management classes provided assistance to Kristyn and her farm. Especially important was the help and mentorship provided by fellow AgPark farmer Fred Hempel, who has always been open to Kristyn's questions and other needs.

Kristyn cites her restaurant connections as a benefit that she brings to the AgPark and as an opportunity for other AgPark farmers. Such connections have been vital for Kristyn's own mentorship and learning experience in being a farmer.

Root and Bloom Farm

Farmers: Linnea Svahn-Jaccoma, Emily Chu Finkel, and Dartanian Kaufman Years at AgPark: 2014 to the present Current Acreage: .5 acre

Root and Bloom Farm joined the Sunol AgPark in 2014 on half an acre. The farm focuses on growing flowers, vegetables, and herbs. Their business is based in Oakland where they offer full 'farmer-florist' services.



Root and Bloom cut flowers

Background

Root and Bloom Farm is operated by three farming partners: Linnea Svahn-Jaccoma, Emily Chu Finkel, and Dartanian (Dart) Kaufman. The three farmers are all graduates of the Apprenticeship in Ecological Horticulture at the UC Santa Cruz-based Center for Agroecology and Sustainable Food Systems (CASFS). Although they each graduated from the program in different years, the CASFS network connected them to each other and helped them discover their common background in education, food justice and their shared vision to develop a resilient small farm business model.

Linnea, Emily, and Dart have worked on their farm business at the Sunol AgPark, while remaining loyal to working in food and farming education and social justice projects. Linnea started working with the SAGE's Farming in the Watershed Education program in spring 2014, leading elementary school students through farm field trips and using Root and Bloom Farm for farm chores and flower related lessons. Emily works with Kitazawa Seed Company, Acta Non Verba, and Pacific Coast Farmer's Market Association, and Dart works with Urban Sprouts.

Root and Bloom Farm focuses mostly on flower production and grows over 100 varieties of cut flowers. Additionally, they grow produce such as eggplants and tomatoes in the warm climate seasons. They offer flower arrangements for events and florists. Another important market outlet is restaurants, where bouquet flower arrangements, edible flowers, vegetables and herbs are all in demand from local Bay Area restaurants. They also initiated a Food and Flowers CSA, including a farm fresh bouquet alongside their herbs and vegetables, to connect directly with Oakland and Bay Area customers.

Crops Grown

Over 100 varieties of cut flowers and mixed vegetables such as eggplants, tomatoes, herbs, etc

Employees

The three farm owners.

Markets Outlets

Restaurants, CSA program, flower arrangements for events and clients.

Success and Challenges

In their first year, the Root and Bloom farmers cite many successes. The business has been a huge learning experience. The farmers successfully ran their small CSA the first season, built good relationship with one main restaurant and are close to making their initial investment back

The challenges encountered by Root and Bloom in their first year involve: the last minute decision to start a farm, which led to a lack of planning time; being part time farmers; balancing all aspects of running a farm business (e.g. marketing in addition to actual production); lack of infrastructure and struggling to get infrastructure set up; challenges of land (heat, soil, weeds); balancing running a business with their social and food justice goals; and lack of financial resources.

Swarm Catcher

Farmer: Diane Dovholuk Years at AgPark: 2006 to the present

Swarm Catcher is a small enterprise at the Sunol AgPark that keeps bees and a few chickens for her own use.

Background

Swarm Catcher is owned by Diane Dovholuk, a local resident in Sunol. Diane used to work with

safe removals of honey bees, and has written articles on attracting bees to gardens. She is also the "Master Gardener" for Wente Vineyard's ½ acre garden, where she grows produce for Wente's restaurant.



Crops Grown

Diane has kept bees and chickens at the AgPark from 2007 until the present. The land she uses at the AgPark is minimal; just enough space for a chicken coop and for bee boxes.

Market Outlets

Swarm Catcher sells most of its honey and egg production to Wente Vineyards, where it complements the produce Diane grows at Wente's garden.

Terra Bella Family Farm

Farmers: Shawn and Beth Seufert Years at AgPark: 2008 to the present Current Acreage: 3 acres

Terra Bella Family Farm grows mixed vegetable crops on three acres at the Sunol AgPark. Terra Bella began operations on its home farm in nearby Pleasanton in 2006 and added its operation at the Sunol AgPark in 2008. As a community-oriented family farm, its 150-member Community Supported Agriculture (CSA) program is a main focus of its operation.

Getting Started at the AgPark

Terra Bella Family Farm is headed by Shawn and Beth Seufert. Before joining the Sunol Ag-Park in 2008, Shawn and Beth had just begun working towards their goal of



Terra Bella Farm's market day

running a community oriented farm. Shawn started down his farming path through the UC Santa Cruz Center for Agroecology and Sustainable Food Systems Program, learning about and being trained in organic agriculture. Shawn combined his organic agriculture training with his previous education background by working in school gardens, but soon pursued the goal of farming his own land.

Shawn and Beth found an acre of land in Pleas-

anton, and broke ground with Terra Bella Family Farms in late 2006. Starting with a field which had laid fallow for decades, it was cultivated into an incredibly bountiful and functional farm featuring rows of beautiful perennial plants among the prolific crops. The small plot was transformed into a thriving six-acre 300-member multi-supplier CSA within just a few years. The farm grew in size as the farmers grew in experience; dabbling in many areas of agriculture including raising 70 hens for eggs and a small herd of goats for dairy and meat.

Changes in Operations

When Terra Bella Family Farm first joined the AgPark, they occupied a half-acre at the AgPark in addition to their one-acre home farm just down the road. Volunteers played a large role for farm help in Terra Bella's initial period at the AgPark, with total volunteer hours amounting to more than 40 a week in the first year. In 2009, their operation at the AgPark expanded to two acres, then up to six acres in 2011, and settled in at three acres in 2014. Their work force grew to include six employees. Terra Bella's farm operation is now solely on the AgPark, where they are able to sustain their CSA and sell to local markets, restaurants and wholesalers.

Crops Grown and Cultivation Practices

Terra Bella Family Farm's ethos approaches farming from a perspective that encompasses the entire system of the land, focusing on cultivating the earth while producing outstanding organic produce. Shawn says, "We have always specialized in unique varieties of fruits and vegetables and continue to add new and amazing varietals to our collection of seasonal offerings."

Terra Bella Farm produces a variety of crops; each year is a process of determining the most lucrative crops and those most beneficial for their CSA. Terra Bella started growing about 10 different crops in their first year at the AgPark, and over 40 types when they expanded to six acres. On their current three acres, they grow around 20-25 different crop varieties. Tomatoes, summer and winter squash, melon and eggplant have been the main crops each year.

Markets and Community Engagement

Terra Bella Farm produce sells its produce to local restaurants, at farmers markets and directly to individual customers. Shawn says, "Our business model is to supply our local communities with the freshest, most locally grown organic produce that money can buy."

Terra Bella Family Farm has engaged in a number of different markets to sell its produce to Bay Area communities. The biggest focus has been their CSA program. It was launched in 2008 with an initial 50 members. Within a year, their CSA grew to over 100 members. Currently, they have a 300 member CSA. In order to create a robust and balanced CSA box for its members, Terra Bella supplements its own crops, especially in seasons when the harvest is low or unvaried, with products from seven other local organic growers. In particular, Terra Bella's 'warm weather' crops are supplemented by crops from other local growers in the area, such as J.E. Perry Farms, which supplies 'cool weather' crops. Fresh bread from local bakeries is also often included. The marketing of their CSA box has evolved over time, by expanding from two to three drop off days a week, and combining the winter and summer CSA shares into one long CSA season. Their CSA program meets one of their biggest goals of engaging the community with local agriculture, and it represents the ideals of Shawn and Beth's family farm dream.

Terra Bella Family Farm has pursued a wide array of other local markets, holding, as Shawn states, a "strong competitive edge over our competition due to the fact that as the local organic farm, in most cases, our produce travels just a few from the farm to the market or restaurant. No other farms could compare with the freshness nor the quality or uniqueness of our produce."

They have sold produce in local farmer markets throughout Pleasanton, Concord, Livermore, and Walnut Creek, selling at four different markets



in 2013. Restaurants and groceries have also been significant buyers, and wholesale grocery outlets have expanded each year. In 2013, about

Shawn Seufert selling his produce

30% of their produce went to the CSA program, 30% to farmers markets, 30% to wholesale accounts, and the remaining 10% to local restaurants. Terra Bella Family Farm has had a strong engagement with their community.

Challenges and Solutions

Terra Bella Family Farm has encountered certain challenges in the production side of farming. As with many small-scale farming operations, issues such as weeds have been an issue.

Other site challenges such as infrastructure, compost and soil management, and collaboration among AgPark Farmers have arisen throughout the years. Terra Bella has also faced challenges in scaling up their operations. Adding animals into the mix has been a challenge at the AgPark site, which currently does not have any animal husbandry enterprises other than Foolish Hens' chickens.

Successes and Opportunities

The diversity of Terra Bella's markets speaks to Shawn's prior marketing experience in direct sales, retail sales and wholesale markets. Terra Bella Family Farm has succeeded in engaging with a diversity of markets, demonstrating the success of the farm and its produce, organic and local food focused goals, and community oriented structure and approach to farming. While the different marketing avenues of wholesale groceries, restaurants and farmers markets have been key to their operation, at their core they place the most value on their CSA program and the community spirit it fosters:

"I love CSA days. It's like an old style post office, where everyone rubs shoulders. The kids learn to use the scale, visit the chickens, and play with other kids. People trade recipes and gossip, and make crazy connections—trading the names of babysitters, mechanics. There's a whole lot of great community-building going on here."

Relationship to SAGE and the AgPark

Through SAGE's programming, Terra Bella participates in sustainable agriculture education programs, and is surrounded by other like-minded farmers. Shawn and Beth are now supported by a team of apprentice farmers, including their two young sons.

Terra Bella Family Farm has proven to be a great success in their Sunol AgPark operations. The spirit of their farm has meshed well with the spirit of the AgPark, and they see themselves and the Sunol AgPark as part of "an evolving family of creative, hard working, educated and compassionate individuals that have the potential to create something incredibly spectacular."

They have also built networks of support. SAGE has been one such network, providing Terra Bella with essential support in advisors, site infrastructure and marketing opportunities. Jim Leap is cited as a fantastic addition to the SAGE team, as his technical assistance provided expertise to specific farmers at the AgPark, and the AgPark farm site management plan as a whole.

In Shawn's words, "SAGE has been instrumental in the success of our farm and brings so much to



Terra Bella Greenhouse

the table in regards to support on all levels of our operations: the farms and their diverse networks and years of experience; Sibella and the entire staff are incredible resources, let alone their personal networks; as well as the great relationship with the SFPUC; and the culture/community of the AgPark."

Shawn and Terra Bella Family Farm have also benefited from the unique education opportunities that the AgPark has provided and facilitated. Through SAGE's Farming in the Watershed field trip program, Shawn has worked as a field trip leader, combining his teaching experience and role as a farmer to lead elementary school students. Shawn also engages with high school students through SAGE's service learning trips and summer internship programs, serving as a mentor for aspiring young farmers. The education programs give AgPark farmers another opportunity to supplement their farm income, while simultaneously having the opportunity to use their own farm for educational purposes.

Transitioning AgPark Farmers

At the end of the 2014 growing season, as this publication was going to press, Terra Bella Family Farms and Foolish Hens Farm decided to leave the AgPark and end their farming operations.

Terra Bella's decision was influenced by timing. At the same time that the farm was dealing with an ongoing struggle to find the most compatible team of farm employees, an increasing number of job opportunities were presented to Shawn and Terra Bella. Shawn decided to pursue many of these projects, most of which involve consulting work for starting new farms, small gardens and edible landscape designs throughout the Bay Area. The experience of starting their own farm at the AgPark gave Terra Bella the confidence to venture out into new projects and the knowledge to consult on other new farm and gardening endeavors. Shawn cites the diversity at the AgPark as a major factor towards building his knowledge and skill set in farming. Farming right next to the different farm operations and production techniques from all the AgPark farmers throughout Terra Bella's eight growing seasons exposed Shawn to a wealth of farming knowledge that he could not have acquired otherwise. Being able to learn different techniques afforded him a range of experience, and could not have been easily as done without the collaborative learning environment that the AgPark fostered.

Foolish Hens' decision to leave the AgPark was a very difficult decision for Aspen and Suzanne. In the end, they came to the conclusion that running a small one-acre farm was not financially sustainable for the amount of work that they were putting in. While they received invaluable help and support from organizations like CAFF, SAGE and the AgPark, they still found themselves underprepared for the time and energy needed to make their acre a financially feasible reality. A number of other factors also influenced their decision, and Foolish Hens notes that

"Injuries, unexpected professional opportunities, love, and a demanding work schedule are all pieces of life that led us to realize our original farm vision, while not unrealistic, demanded an incredible commitment and risk which we increasingly were reticent to make. It became clear that financially it would not be enough to let us live in the Bay Area and that our lives were taking us in other directions." They note that the value of their experience at the AgPark, not only in imparting important production and business knowledge that they will carry with them towards future farming endeavors, but also in that "the Ag Park gave us a place to quite simply allow our dream a chance to come to fruition."

SAGE maintains an active file of prospective farmers interested in getting land at the AgPark. Based on its process for bringing in new farmers (described on page 26), SAGE has invited one new farmer, Joanna Letz, to sign a License Agreement and is in serious discussion with two other prospective farmers, Majid Yousef and Walid Saad. A farming group through the New Roots program of the International Rescue Committee is interested in getting land in the next year or two, and also seems like a good match for the Sunol AgPark community.

Joanna Letz

Joanna Letz is moving onto one acre at the Sunol AgPark in 2015. She has spent the last six years farming on four different organic farms in California, and she also completed the Center for Agroecology and Sustainable Food Systems certificate at UC Santa Cruz. Joanna has wanted to start her own farm and business for years and is looking forward to becoming a part of the AgPark community. She plans to grow vegetables, flowers and herbs for direct market sales. "I am excited to share my farming experience and collaborate with the other farmers."

Majid Yousef

Prospective AgPark farmer, Majid Yousef, has had a passion for farming his entire life, as his father was a part time farmer in his small town in Iran. Majid has worked in the food supply industry for the last 15 years while also growing organic produce on a small, family scale. He is looking to combine his farming passion with his knowledge of the food supply business in order to be able to
provide his local communities and businesses with local, organic products. At the AgPark, Majid hopes to grow chives, basil, watergrass, dillweed, cucumber and fenugreek, and will be supplying mainly to local Mediterranean markets and food outlets, including his family's Damavand Market.

Walid Saad

Prospective AgPark farmer, Walid comes from a farming background in Lebanon where he developed a life-long appreciation for healthy food and sustainable living. He became a California certified organic grower in 1990 and has been gardening in community gardens, keeping bees and teaching gardening classes throughout the East Bay for the past ten years. At the AgPark, Walid hopes to grow a variety of annual crops such as arugula, garlic, radish, beans, chard, carrots, dandelion, onion, cabbage, bell peppers, melons, sheep sorrel, sweet basil, parsley, mint and fennel. He also hopes to cultivate perennial herbs, tend laying hens and rabbits, and perhaps transplant his fig, pomegranate, and grape fruit trees to the demonstration orchard (in development at the AgPark).

International Rescue Committee

The International Rescue Committee is a nonprofit organization based in Oakland that focuses on humanitarian crises and provides essential human rights services to refugees. Their New Roots program provides assistance to refugees from rural or farming backgrounds to rebuild their lives in the U.S. The programs helps refugees become self-sufficient through community gardening, nutrition education and small-business farming. The program has helped benefit over 2,500 people from over 30 nations. IRC is looking to move onto AgPark land in the next year or two in efforts to expand their New Roots program and have land available for refugees with farming backgrounds who wish to continue pursuing this livelihood while integrating into the their new homes and communities.

Past AgPark Farmers

Fico

Farmer: Luciana Messina Years at AgPark: 2008 to 2013 Acreage: 1.5 acres

Fico was a small potted fig orchard at the Sunol AgPark. Fico Farm was at the AgPark from 2008 - 2013. The orchard was initially on a half-acre at the AgPark and then moved to the ~1.5-acre orchard area of the AgPark in 2012.

Background

Luciana Messina headed Fico (Italian for fig), a project owned and managed by Systems to Spec, Inc. Luciana is a life-long fruit tree hobbyist as well as an aspiring urban farmer, inspired by the orchards grown by her grandfathers in the East Bay. After establishing a dwarf and espalier home



orchard in the Almaden Valley, she learned to keep passionfruit vines in check at Strybing Arboretum. While living abroad, Luciana participated in agricultural cooperatives, and researched and visited historical kitchen

Luciana Messina holding fig

gardens and intensively grown fruit orchards in the Netherlands, France and Italy. Luciana was seeking beginning farmer opportunities in the east San Francisco Bay region when she spotted a SAGE ad in the California FarmLink newsletter. SAGE's promotion of urban agriculture and emphasis on public awareness convinced her to apply as a beginning farmer/grower at the Sunol AgPark.

Crops Grown

Fico specialized solely in fresh fig production in

specially-adapted containers. Luciana experimented in growing many different varieties of figs, chosen for distinct flavors and colors. She aimed to grow trees using traditional techniques to



Fico Farm Figs

minimize space and still yield fruit; many of these techniques are traceable back to the medieval monasteries and planted forests and hedgerows of northern Europe.

The primary goal of Fico was to demonstrate that organic fresh figs can be grown, as a specialty agricultural crop, in a high-density container orchard in an urban environment. Container-grown fig trees present other agricultural advantages besides mobility: the ability to control soil quality for organic certification, the protection of tree roots from native fauna, and the dwarfing of the trees allows ease of maintenance and fruit picking.

The secondary goal of Fico was educational: to help promote the large range of fresh figs and also their health qualities. There are dozens of varieties of figs with a wide range of taste characteristics. Fresh figs are a good source of dietary fiber, potassium and manganese. Also, fresh figs appeal to cultures from Europe and Latin America, the Middle East (where figs originated) and Japan (where figs have been grown for three centuries).

Employees

Luciana was the sole operator of Fico Farm. In her first year, she had help from one volunteer, who contributed over 60 hours of work to Fico Farm.

Markets Outlets

Fico initially started its marketing by distributing samples to local restaurants. In 2009, it started

selling products to restaurants throughout the East Bay. The next year, Fico created a CSA program to serve companies located in Mountain View and Palo Alto. Fico also sold to Italian restaurants for specialty ingredients in pizzas.

Luciana left the AgPark at the end of 2013 due to a change in her full time employment.

Iu-Mien Village Farms

Farmers: Iu-Mien families, Warn and Muan Saechao, Chan Saelee Years at AgPark: 2006 to 2013 Acreage: 2.5 acre



lage Farms is a collaboration of Laotian immigrant and family farmers who farmed at the Sunol AgPark from its creation in 2006 until 2013. The farmers grew traditional Laotian crops such as long beans, for their own community, along with crops for a broader market, mainly strawberries. The farm worked

Iu-Mien Vil-

Iu-Mien Village Farmers

extensively in the Iu-Mien community, providing jobs for immigrant farmers, produce for youth and senior centers, and a space for Iu-Mien immigrants to connect to common heritages and to land itself on the AgPark farm.

Getting Started at the AgPark

Iu-Mien Village Farms was managed by the East Bay Asian Youth Center (EBAYC) from 2006 until 2010. EBAYC started the project under a three year USDA Community Food Grant. The farm employed immigrant farmers of the Laotian Iu-Mien community, provided produce sales for many of its affiliate youth centers, schools and produce stands, and used both the land and its produce to connect Asian populations to healthy, nutritious and culturally appropriate food. EBAYC has over thirty years of successful youth and community empowerment programs and partnerships in the area, and envisioned successes at the Sunol Ag-Park in "creating a nutritional, agricultural, and educational resource for the communities of our area; beginning a true local food system on a scale that has a real impact."

Throughout the 1980s, several thousand rural Laotians immigrated to East Oakland. The Sunol AgPark, located close to these communities, helped Laotian immigrants connect to the land and their traditional farming backgrounds. Many of the Iu-Mien farmers were women, especially older women who saw the chance to connect to land as a stress-relieving and productive activity. The ability to work on the land provided an outlet for Iu-Mien women to use their years of farming experience and extensive knowledge of traditional farming practices.

Changes in Operations

EBAYC started farming at the Sunol AgPark on two acres of land. Lew Chien Saelee acted as EBAYC's project coordinator and oversaw the land that was farmed by multiple immigrant families. From 2007 to 2010, EBAYC was on four acres, allowing five Iu-Mien families to farm on the land. After 2010, the Iu-Mien Village Farms project transitioned from management by EBAYC to farm business ownership by Warn and Muang Saechao, members of one of the family farms working on the Iu-Mien Village Farms. Warn and Muang continued farming at the Sunol AgPark on 2.5 acres of land. In the end of 2011, ownership of the Iu-Mien farms transitioned to their family member Chan Saelee. Chan had prior farming experience in Thailand, and assisted Warn in organic strawberry production at the Sunol AgPark. The farm was staffed by Chan's family, continuing the family farming tradition on the Iu-Mien Farm. At the end of 2013, Chan and his family decided to leave the AgPark and Iu-Mien Village Farms, due to a combination of insufficient returns and weed management related factors.

Crops Grown and Cultivation Practices

The Laotian farmers and their traditional rural backgrounds were a good fit for the Sunol Ag-Park. Warm weather in Sunol matched similar climates for Laotian produce such as long beans, squash and onions. Most of the small-scale family farmers produced food mainly for subsistence, thus cultivating a large variety of traditional crops. Long beans, tomatoes, squash, cucumbers and corn were some of the crops grown by family farmers with EBAYC and later by the Saechao and Saelee families. Strawberries became a main crop of Iu-Mien Village Farms. Warn and Muang Saechao were given use of two acres to dedicate to organic strawberry cultivation, a lucrative crop due to the relatively low number of local organic strawberry producers in the Bay Area. Warn and Muang, and Chan after he took over, dedicated most of the land to grow Seascape and Albion organic strawberries.

Iu-Mien farmers were accustomed to using organic inputs and no chemicals in their cultivation, making organic produce an additional component of the healthy produce sold to the EBAYC and other community outlets. However, other farming techniques did present new challenges to the traditional Laotian farmers. Using drip irrigation was new to them, as Laotian agriculture depends solely on rain. At the AgPark, Iu-Mien Village farmers learned how to manage irrigation systems, and attended organic production and other farming assistance workshops.

Iu-Mien farmers were eager to learn new techniques, asking for assistance from EBAYC on marketing and from SAGE on a range of technical assistance. In a 2008 evaluation, the Iu-Mien farmers requested "education for the farmers on American organic farming techniques, such as composting, fertilizers, soil amendments like gypsum, how to choose the right crops and varieties for our climate and soil type, organic weed control, maintaining healthy crops after planting, beneficial insects." Farming can be a difficult profession, especially for immigrant farmers in foreign land and in new climate conditions, but Iu-Mien farmers managed to employ their traditional farming backgrounds while taking advantage of EBAYC and SAGE's networks of support to improve their operations and organic practices.

Markets and Community Engagement

EBAYC's partnership facilitated markets for Iu-Mien produce, with much of the produce supplying produce stands and cooking classes at schools partnered with EBAYC. Direct sales to Lao-



tian and EBAYC families, neighbors and ethnic markets such as Lao Iu-Mien Market provided market outlets that represented the more informal Asian community networks, receptive to local and culturally relevant food production.

Initially many families grew for their own subsistence and local markets facilitated by EBAYC. Warn and Muang Saechao took the opportunity at the Sunol AgPark to set up a more commercial farming enterprise - strawberry cultivation - and to develop new markets including Monterey Market in Berkeley and Whole Foods. When Chan Saelee took over in 2011, Monterey Markets and some restaurants throughout the East Bay remained important business partners. Volumes of sales increased and the Saelee family continued dedicating most of their farming efforts into strawberry production. The "u-pick" function of the strawberry fields also was as an important aspect for community engagement on the farm, with visitors and elementary school students tasting and buying strawberries straight off the plant.

Community partnership was a key component of the EBAYC Iu-Mien farm project, as the farm itself represented an important site for community and youth engagement. Along with cooking and nutrition classes using Iu-Mien produce, class visits to the farm engaged youth with where their food comes from.

Iu-Mien farms engaged with other educational professionals as well, such as with a UC Berkeley graduate student, a group of teachers and nutrition educators working in Berkeley Unified School District's Network for a Healthy California project and classroom leaders who worked with EBAYC.

Visits to the AgPark from other Laotian immigrants and those from the Iu-Mien community were important as well. "U-pick" strawberries and long beans served as enticing activities that marketed produce while engaging visitors with the land and crops. Seniors from the Iu-Mien Cultural Center visited and harvested long beans from the farm, families from the Iu-Mien Baptist Church visited the farm to volunteer and purchase produce, Laotian families from middle and elementary schools made visits to the farm and a few Iu-Mien immigrants even from far outside of the Bay Area paid visits to the Village farms. Community connections were important for EBAYC, and also for the farmers in linking their Laotian roots with the nearby Laotian communities.

Challenges and Solutions

While strawberries presented lucrative produce sales, it also presented issues in crop management. SAGE had facilitated a rotation between the Iu-Mien strawberry fields and others farmers' fields where neither strawberries, tomatoes or solanaceae crops had been grown. This helped to some extent in managing for the soil diseases that plague organic strawberry production. However, it was not a sufficient solution.

When Chan moved onto the land, one of the fields was not healthy enough to grow strawberries; its soil was too stiff (likely as a result of cultivation of wet soil) and resulted in poor quality berries. Although fertil-



Chan Saelee, Iu-Mien Village Farms

izer application did not help the harvests, Chan still aimed in his 2012 year-end evaluation to "continue the different practices... to maintain the berries so they are healthy and ready for harvest the next season." Chan also noted the assistance provided by SAGE: "There is a really helpful staff that helped address the problems of the stiffness of the dirt in one of the fields to figure out why the berries were not as strong as they should be."

In addition, in two of his fields where Chan was cultivating second year strawberries, an underlying Bermuda grass problem got out of control. In fall 2013, the strawberry fields were tilled and fallowed for six months to eradicate the Bermuda grass.

Successes and Opportunities

The opportunity to farm at the AgPark was enjoyed by many of the Iu-Mien families in the first years of the operation, which were subsidized by EBAYC. Without the grant subsidy, only one family was prepared to take over the License Agreement and its associated financial responsibilities. That represented success in EBAYC's view, since one Mien family would have the opportunity to run a small business. The partnership between the Iu-Mien Village Farms and EBAYC also benefited the local Oakland communities who received the produce, including local schools and families. When the farm was transferred from the Saechaos to Chan Saelee, the Mien community maintained access to the AgPark land and its associated resources. While the strawberry production was underway, local customers and AgPark visitors enjoyed the incomparable flavor of freshly picked organic berries. Finally, the Iu-Mien Village Farms were a founding AgPark farm and provided valuable cultural and agricultural diversity to the AgPark farm and community of farmers.

Relationship to SAGE and the AgPark

Lew Chien Saelee and EBAYC recognized the more complex, policy related aspects of farming, noting "In Laos we only farmed on land. Here we have to farm on paper first." While Iu-Mien farmers came from extensive community farming backgrounds, there are many logistical and bureaucratic obstacles that immigrant farmers have to face in farming in the U.S.. However, under the direction of the EBAYC program, and the partnership with SAGE, many families were able to work on the land to grow traditional subsistence crops and provide for their families and the greater EBAYC-served communities throughout the East Bay.

Another goal of the Iu-Mien farm project was to give immigrant farmers skills to market their produce and to become economically self-sustaining. Iu-Mien farmers noted in many evaluations the benefit of marketing and business assistance, with much of such assistance provided through SAGE's own network of partnerships and technical farming consultants.

Iu-Mien farmers navigated the complexity of organic certification for their strawberries, and sought opportunities to learn about strawberry production through "help with arranging field trips to commercial organic strawberry farms where their primary focus is organic strawberries—where it is not just a side crop." In response, SAGE arranged a visit to Driscoll's farm for Lew Chien Saelee and Muang Saechao and invited numerous farm advisors, including Alameda County's Farm Advisor and an advisor from the National Center for Appropriate Technology, to visit the Iu-Mien Village Farm to provide technical assistance related to organic fertilization, irrigation, post-harvest handling and food safety. In addition, SAGE assisted the Iu-Mien Village farmers with marketing assistance, connecting them to potential buyers.

People's Grocery

Farmers: Multiple organizational contacts and farm managers from People's Grocery Years at AgPark: 2006-2009 Current Acreage: 3.5 acres

People's Grocery was founded in 2002 by residents of West Oakland with the mission to improve the health and local economy of West Oakland



through investing in the local food system. The founders of People's Grocery recognized that diet-related diseases and the low-quality of life experienced by residents could be changed by creating a sustainable food system for their community. People's Grocery has become a focal point in West Oakland for reviving their community through fresh, healthy, organic, locally grown produce. For four years, People's Grocery operated a farm at the Sunol AgPark dedicated to producing healthy food for the West Oakland community.

Getting Started at the AgPark

In 2002, Malaika Edwards, Leander Sellers, and Brahm Ahmadi co-founded the non-profit People's Grocery, with the goal to build a healthier environment, strengthen social capital and increase economic opportunity for West Oakland. In 2003, they started a program to educate youth about organic gardening, nutrition and cooking in hopes of creating demand for healthier produce that could potentially support a small grocery store. People's Grocery expanded their programs by converting an old postal truck into a healthy market on wheels. They loaded it with healthy packaged foods and organic locally grown produce from nearby farmers and gardens; all at an affordable price for customers. Over the next five years, the "Mobile Market" served roughly 3,500 of West Oakland's 30,000 residents annually.

As the program expanded, People's Grocery needed to procure more food in order to sustain the growing demand of the residents. In 2006, they partnered with SAGE to become one of first farming groups to lease land at the AgPark. The AgPark proved to be a success for People's in giving interns, community-members and volunteers hands-on farm experience, while giving residents access to fresh, organic produce. Their relationship with the AgPark allowed them to start-up a new grocery program called "Grub Box", which was launched in 2008. This CSA-type program allowed West Oakland residents who had limited access to healthy food, to order fresh, locallygrown seasonal produce and have it delivered to their front door at an affordable price.

Changes in Operations

During People's Grocery's four years at the Sunol AgPark, they scaled up their food production each year. Hubert McCabe as the first farm manager at People's Sunol Farm. He helped establish a farming system and improve the overall productivity of the two-acre operation, which was heavily reliant on volunteer labor. In late 2008, People's Grocery hired Brent Walker, a Farm Manager for an expanded 3.5 acres of land growing seasonal crops. At the end of the 2009 season, People's Grocery decided to relocate their facilities closer to Oakland in order to better match their mission and work in West Oakland, explaining that:

"While farming in Sunol was a critical step in building our experience and capacity to grow healthy produce, the farm was too far away from Oakland to be able to regularly engage local residents in our work as volunteers and participants in larger numbers. Additionally, People's Grocery's long term goal in urban agriculture is to build local capacity within or near West Oakland for fresh food production. We now have the opportunity to focus more locally and build on the experience and track record we got while farming in Sunol to achieve this goal."

People's Grocery partnered up with Dig Deep Farms and Produce after their departure from the AgPark. Leaving the AgPark meant finding another place to grow their produce for the Grub Box program. This new partnership allowed People's Grocery's produce to be grown in San Leandro, much closer to West Oakland than Sunol.

Crops Grown and Cultivation Practices

People's Grocery started off at the AgPark in 2006 with two acres, supplementing their few urban gardens in Oakland. They grew a diversity of crops for the community food program, including greens, carrots, tomatoes, herbs, okra, peppers and flowers. Labor was provided by People's Grocery's staff and volunteers, who helped with all aspects



of production. People's Grocery mainly practiced biointensive forms of agriculture using hand tools, with

People's Grocery farm worker harvesting

multiple succession plantings throughout the year to ensure continual produce availability for its customers. In 2008, People's Grocery planted 69 varieties of crops, producing 6,000 lbs of produce and 1,500 heads of greens on two acres. This resulted in the donation of over 1,000 lbs of produce to the community through the Grub Box program.

Markets and Community Engagement

Throughout the year, People's Grocery hosted workshops and monthly volunteer workdays in order to maintain their farm. Recognized as a leader in the food justice movement, People's Grocery engaged hundreds of volunteers in its agriculture program. People's Grocery also trained youth interns in organic agriculture through hand-on experiences working on the farm.

After the successes of the Mobile Market, People's Grocery refined their marketing methods with their Grub Box CSA program. The program made



local and organically grown produce affordable and attainable to the communities of West Oakland.

People's Grocery farmers selling produce

By partnering with SAGE, People's Grocery was able to organically and sustainably grow their own produce to distribute to residents of West Oakland. Low-income households, food stamp recipients and those suffering from chronic diseases qualified to receive Grub Boxes at a discounted price. Grub Boxes were sold at a higher rate to middle and upper-class households, as sponsorship boxes. These sponsorship boxes funded and supported training and development for residents interested in agriculture, nutrition and education fields.

Successes and Opportunities

People's Grocery successfully farmed at the Ag-Park for four years. Tens of thousands of pounds of fresh local produce were grown and distributed to West Oakland communities and many urban dwellers were exposed to small-scale farming. During People's Grocery's tenure at the AgPark, an innovative CSA business model to address food access was born and the nonprofit was able to develop experience in food production.

Relationship to SAGE and the AgPark

People's Grocery and SAGE had a productive relationship during their partnership at the AgPark. Both nonprofit organizations shared an interest in trying new approaches to improve the food system and in making healthy, local food available to nearby communities. However, it was in the best interest of People's Grocery to relocate their farming facilities closer to West Oakland. In 2010, they departed from Sunol and moved their operations to San Leandro with their new partners, Dig Deep Farms and Produce. SAGE and People's Grocery both continue working towards sustainable agriculture and food justice in the East Bay.

Assessment and Lessons Learned

All of the current farmers, including one who has been at the AgPark since its inception, express strong support for the AgPark model and current management. Of the twelve farming groups that have licensed land at the Sunol AgPark, eight groups continue to farm there. While the diversity of the AgPark's farms and farming operations have presented different challenges and opportunities over the years, a number of shared perspectives about farming at the AgPark have emerged since the project's inception.

Farming at the Sunol AgPark has benefits that are recognized by former and current farmers. Many of these benefits were built into the model; other benefits have emerged from the collaborations between the farmers and between farmers and SAGE.

Farming at the AgPark: Benefits

Farmers cite the following benefits, that SAGE has successfully pro-actively promoted as fundamental tenets of part of the AgPark model:

- Access to arable farmland, close to a large metropolitan population and markets, and to reliable and affordable water
- Access to infrastructure (fencing; irrigation main lines, meters and sand filter; organically certified land, farm roads)
- Flexible commitment (year-to-year license with potential to expand)
- Access to technical assistance provided by SAGE, including consultants on all aspects of production and business planning
- Access to site management provided by SAGE, including: repairs and maintenance all of common infrastructure and provision of a roster of reliable service people; communication with

SFPUC; annual soil testing, including interpretations and recommendations; and site-wide soil and pest management, as needed

- Coordination of (and fronting the funds for) collective purchasing of inputs, including cover crop seed, compost, lime and straw
- Coordination of (and fronting the funds for) soil management and enhancement, including deep ripping, leveling, drilling in cover crop seed in fall and tilling in cover crop in spring (services provided by local hay farmer with a large tractor)
- Coordination of external grants and contracts to support farming practices

Farmers cite the additional benefits, as follows, that emerged as part of ongoing collaborations:

- Relationships with other farmers, such as opportunities for mentoring; ability to share greenhouse space, tools, equipment' and information; and a sense of community
- •Access to new markets and networks through connection to SAGE and AgPark
- •Opportunities to participate in educational programming and community outreach (through SAGE education programs and community events)

In addition to the established infrastructure and management support provided by SAGE, the AgPark model provides socio-economic benefits to participating farmers, in large part due to having multiple farmers co-located on a site that also incorporates public education and natural resource stewardship. SAGE's role as manager of the agriculture, public education and natural resource programs has enabled AgPark farmers to easily network with diverse parties, including other farmers, visiting school groups, potential customers, technical assistance providers and other groups. These relationships and networking opportunities are important value-adds that farmers "going it alone" would not likely experience as easily.

Farming at the AgPark: Challenges

Farming is not an easy endeavor, even under ideal conditions. In addition to the standard challenges which small farmers face, the Sunol AgPark farmers have identified a number of other challenges that come with farming at the AgPark. These challenges relate to the technical aspects of farming and the management considerations inherent in a collaborative, multi-functional endeavor.

In summary, challenges cited by AgPark farmers include:

- Production challenges specific to the site, including Bermuda grass and other pests (e.g. ground squirrels, symphylans) that have been problematic at different times
- Being negatively affected by the management practices of neighboring AgPark farms (especially related to weed and pest problems)
- Accepting and sharing responsibility for sitewide management
- Limited access to the site on evenings and weekends for volunteers, customers, and other visitors. (The site is open to the public Monday-Friday, from 9 am to 3 pm.)
- Additional time required to participate in group meetings, public events and educational programs, especially during critical times in the season
- Difficulty in forming connections with other farmers due to farmer turnover and independent temperaments.

It is also important to note that some of the challenges that were experienced by the first AgPark farmers were resolved after a few years, once the site was mostly developed. In the first years, there was uncertainty regarding the level of shared infrastructure that would ultimately be developed on the site (e.g. greenhouses, packing and storage sheds, farm stands and shade structures were all considered as shared infrastructure investments early on). Once the basic infrastructure had been established, it became clear that it would be most economic and feasible for individual farmers to develop their own additional infrastructure. This clarity about what resources would be available to participating farmers helped the existing and prospective farmers to plan accordingly. The farmer policies helped to codify these issues, in addition to providing guidelines for site development and farmer investments.

Financial sustainability is a challenge cited by nearly every farmer; however this is an issue that relates more broadly to the profession - and to beginning farmers in particular - than to the particulars of farming at the AgPark.

Looking Forward

Four new farming enterprises started at the Sunol AgPark in 2014, joining two long-running enterprises, and two enterprises which began in 2012 and 2013, respectively. As this new community of farmers gels and the individual farming enterprises mature, the AgPark farmers are looking forward to improving their collaboration, both to seize new marketing opportunities and to tackle internal management challenges.

At the year-end meeting in 2013, the farmers had a productive meeting to identify goals and aspirations for the coming year. In general, all of the farmers agreed that they would like to keep farming at the AgPark and to work more closely together to improve the cohesiveness of the community and to help each other achieve greater success. Some of the proposed ideas include:

- Working together to improve the aesthetics of the farm (e.g. improved weed management and materials storage)
- Helping each other (especially new farmers) to develop realistic business plans and feasible and hopefully more profitable - cropping plans and operations systems
- More coordination and information sharing to: improve relationships with farm workers; identify collaborative marketing opportunities; share transportation and other resources; improve site-wide management; and to share labor (e.g. through an internship program)

In summary, the AgPark farmers are passionate, committed and hard-working entrepreneurs, who each come to farming at the AgPark with different motivations and experiences. However, all of the farmers have been farming for less than ten years, and most of them are still considered beginning farmers. The AgPark model provides valuable access to land and resources that can help farmers to get a foothold in the field. However, the reality is that starting a farm business is hard, and the AgPark model does not solve many of the profitability questions that all farmers face. In addition, many of the benefits offered by a collaborative farming model can also be seen as challenges, when viewed in a different light.

In the long run, it appears that the benefits of farming alongside other farmers in the semipublic eye outweigh the costs, at least for certain farmers, since the AgPark tenants are enthusiastic about helping the AgPark continue to grow as a model.



The SFPUC Landowner Perspective

he San Francisco Public Utilities Commission (SFPUC) is the partner that allowed the concept of an AgPark to become realized as the Sunol Water Temple AgPark. The issuance of a lease to SAGE to develop and operate the AgPark was in keeping with the SFPUC's Water Enterprise Environmental Stewardship Policy, which includes protection and restoration of watersheds lands and public education about the critical importance of the regional water supply system and watershed and rights-of-way lands. The support of the fledging AgPark, as a farm and education venue, was also an important early investment in the SFPUC's Watershed and Environmental Stewardship Program. It is an investment the SFPUC's Natural Resources and Lands Management Division staff deems as most worthwhile.

About the SFPUC

The San Francisco Public Utilities Commission (SFPUC) is a department of the City and County of San Francisco that provides water and wastewater services to San Francisco, wholesale water to three Bay Area Counties and green hydroelectric and solar power to San Francisco's municipal departments.

Aerial of Sunol (2010)

The SFPUC manages a complex water supply system consisting of reservoirs, tunnels, pipelines and treatment facilities and is the third largest municipal utility agency in California. The SFPUC provides water to 2.6 million customers for residential, commercial and industrial uses. Approximately one-third of its water is delivered to customers within San Francisco, while the remaining two-thirds is sent to Alameda, San Mateo, and Santa Clara counties. Aside from delivering water, the SFPUC is also responsible for treating wastewater before discharging it into the San Francisco Bay and the Pacific Ocean. The operations of the SFPUC are governed by a fivemember Commission. The five Commissioners are appointed by the Mayor, confirmed by the Board of Supervisors, and serve four-year terms.

The SFPUC is responsible for management of approximately 63,000 acres of watershed lands (40,000 acres in East Bay and 23,000 in the Peninsula) and 210 miles of rights-of-way. These lands are managed by the Natural Resources and Lands Management Division of SFPUC, which is responsible for monitoring, protecting, and restoring these lands and ecological resources.

The SFPUC - Landowner of the Sunol Water Temple and AgPark

The Sunol Water Temple and surrounding land has been owned by the City and County of San Francisco since 1930, when San Francisco purchased the Spring Valley Water Company, a private company.

In 1999, the SFPUC commissioned the Preliminary Sunol Landscape and Recreation Plan. This Plan was developed to provide information regarding appropriate recreational and landscape concepts in the Sunol Valley area near the Sunol Temple and in the vicinity of ongoing quarry operations. The Plan included a number of recreation, public access, resource restoration, agriculture, and education goals for the area around the Temple and for the entire 200-acre quarry area.

SFPUC Engagement at the AgPark, 2005-2014

The Permit Phase, 2005-2006

In May 2005, SAGE produced a *Preliminary Feasibility Study for the Sunol Agricultural Park*. The SFPUC recognized that SAGE's emerging AgPark model was synergistic with the SFPUC's *Preliminary Sunol Landscape and Recreation Plan* (1999).

In late 2005, the SFPUC staff recognized the Sunol Water Temple Agricultural Park Preliminary Implementation Plan as consistent with – and helping to fulfill - the SFPUC's goals for the area around the Sunol Water Temple. The Natural Resources and Lands Management designated Watershed Resource Specialist Tim Koopmann as the liaison to the project. Tim is also a Sunol resident and fourth-generation Sunol Valley rancher and has a passion for agriculture and agricultural education.

In early 2006, the Commission issued SAGE a 90-day Permit (later extended to a month-tomonth Revocable Permit) that allowed SAGE to initiate site improvements and farming activities. The critical improvements, without which farming could not proceed, included establishing an irrigation system and constructing a perimeter game fence. The SFPUC already had in place an underground pressurized raw water line, with a hook up, that ran alongside the AgPark area. Working with an irrigation installation company retained



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Map of Hetch Hetchy Regional Water System

by SAGE, SFPUC Water Supply and Treatment Division staff installed and set the water pressure regulator on the SFPUC side; SAGE handled the sand filter, back flow preventer, and main lines on the AgPark side.

The Permit period, which ultimately extended to 15 months, provided the opportunity for SAGE to demonstrate its ability to develop and manage the AgPark consistent with SFPUC's plans and policies.

Creating and Refining the Master Lease, 2006-2007

In summer 2006, the SFPUC and SAGE began the process of creating a long-term lease for the AgPark land. Refining the lease terms and getting approvals took a total of nine months.

The lease included a provision that there would not be a rental fee for use of the land. This arrangement was based on the understanding that the Sunol AgPark, as operated by SAGE, a 501c3

Excerpts from the Preliminary Implementation Plan, an Attachment to the 90-Day Permit

- *Vision*: The Sunol Water Temple Agricultural Park is envisioned as an entity that promotes productive agri culture, public education about natural resource stewardship, and a connection between the City and County of San Francisco and its watershed lands.
- *Goals*: The Sunol Water Temple Agricultural Park will significantly help to further the following goals as set forth in the Preliminary Sunol Landscape and Recreation Plan:
 - Incorporate agricultural elements which draw upon the agricultural history of the region

• Provide for educational and interpretive opportunities that relate to water conservation and use, the filter galleries, the area's history, agriculture, natural resources, and mining

- · Provide for natural resource restoration and enhancement
- Develop low-intensity recreation use and public access in the area around the Temple

Assumptions: The following assumptions have guided the development of the preliminary Sunol AgParks Plan:

• The AgParks plan conforms to the policies, goals, and management actions of the SFPUC's Alameda Watershed Management Plan

• To the extent that the AgPark Plan is congruent with specific elements of the Preliminary Sunol Landscape and Recreation Plan, the SFPUC will participate by providing services and developing infrastructure, as specified in the plan elements and budget

• A primary purpose of the Sunol AgPark is to educate the public about agriculture, the agricultural history of the region, and the area's natural and cultural resources

• The expectation on the part of SFPUC and SAGE is that the AgPark will be successful and that after the initial five year period, the agreement may be extended

nonprofit, in partnership with SFPUC and other partners, has education, natural resource enhancement/restoration, and community economic development purposes.

The lease also included a provision for a one-time grant of \$65,000, of which \$25,000 was specified to be applied toward the construction of permanent improvements including the fence and underground irrigation system. The other \$40,000 was specified to be applied to the development of a comprehensive Management Plan governing the agricultural, educational, and natural resources enhancement aspects of the AgPark.

One of the more complicated lease terms to resolve was determining the water rate, in part because at the time the amount of water that the AgPark would need was not clear. As a water provider, SFPUC needs to have a transparent rate structure and charge for water delivery services. The issue was resolved initially by charging SAGE a flat rate based on the assumption of a not-to-exceed volume used and keyed to an agriculture irrigation water rate (W-24). However, the provision that water used in excess of the not-to-exceed volume would be billed at a much higher residential rate (W-20) proved to be challenging to SAGE, since as the 18-acre AgPark became fully planted and more water was needed, the water bill became a large operating cost for SAGE which jeopardized its ability to sustainably manage the AgPark. This issue was resolved in the 2011 Lease Amendment, described below.

Another complicated lease term related to a requirement in the SFPUC's *Alameda Watershed Management Plan* (2000), incorporated by reference into the lease. The requirement was for a "300-foot disturbance-free buffer" around all water bodies and streams, especially those within "High Water Quality Vulnerabilities Zones." Given the site specifics at this location, the SF-PUC accepted a plan developed by the Natural Resources Conservation Service (NRCS) for a



Sunol Water Temple (2008)

30-foot wide filter strip at the edge of the farm nearest to the Arroyo de la Laguna.

Many lease terms were standard, such as insurance requirements, indemnification provisions, and adherence to governing law. Others had to be tailored, such as the provision for SAGE to enter into one-year subleases, or Licenses, with farmer tenants. (The License Agreement is an approved Appendix to the Lease.) Some seemingly innocuous lease terms proved problematic for SAGE, such as the prohibition against the 'Tenant' (SAGE) or any of its subcontractors from hiring a person with a specific type of conviction record to work with minors. The objection to this requirement from a farmer subtenant who serves at-risk youth and operates urban farms was resolved by refining the list of convictions specified.

In March 2007, the SFPUC finalized the 9-year Master Lease with SAGE for development and operation of the Sunol AgPark. The SFPUC was not actively involved in the development of the Sunol AgPark Management Plan, but did approve the Plan when SAGE completed it in March 2008.

Creating and Refining the Lease Amendment, 2009-2011

In mid-2009, the SFPUC and SAGE started discussions about a Lease Amendment. The need for a Lease Amendment was prompted by several

issues: the need to adjust the water rate; the need for the SFPUC to resume control of part of the AgPark near the Water Temple, slated at the time as the site for the construction of a permanent Watershed Education Center; the expansion of the AgPark to include stewardship of an old 1.5-acre orchard on SFPUC land near the AgPark; and the desire for the SFPUC to support SAGE's provision of educational programs and SAGE's engagement in the planning for the Watershed Education Center.

Below is a summary of key terms negotiated as part of the Lease Amendment:

Water rates: The revised water rate was established at a baseline of \$0.75 per unit or ~\$325 per acre foot; with a higher W-21 water rate to be triggered if water use exceeded 22,400 units (~51.5 acre feet) in a calendar year

Management of 1.5-acre orchard: SAGE was given the right to manage the orchard, as is, and to produce a plan for long-term management

Education program grants: The SFPUC agreed to give SAGE \$65,000 per year for five years to provide educational programming to students from under-served communities, through the standards-based curriculum Farming in the Watershed produced by SAGE in 2010. The SFPUC also gave SAGE an additional grant of ~ \$70,000 to develop detailed recommendations for programming for the future Watershed Center and to participate in project planning

Restrictions on the use of the Sunol AgPark logo: SFPUC restricts the use by SAGE and the farmers of the Sunol AgPark logo (which prominently features the Sunol Water Temple) to the lease period

For overview of SFPUC grant funds in the context of the overall AgPark budget, see page 43.

The Master Lease Plus Lease Amendment Phase, 2011-2016

The Lease Amendment became effective as of May 1, 2011. Since then, SAGE has been managing the Sunol AgPark according to the terms of the Master Lease plus the Lease Amendment. As of mid-2014, it does not appear that any more amendments to the lease will be necessary.

As noted at the outset of this section, providing public education about watersheds and water supply systems use – and, more broadly, about natural resource stewardship – is a priority for the SFPUC and has been an important point of connection between the SFPUC and SAGE. SAGE's accomplishments in providing educational programs for elementary school students, high school students and the community (described in the Education Section of the SAGE Perspective chapter) have been made possible through the annual SFPUC education program grant along with other funds leveraged by this grant.

The SFPUC was also supportive of the construc-

SFPUC Financial Support for Sunol AgPark Start-up & Education Programs			
2007	AgPark Start Up Funds, incl. \$40 K - Management Plan, \$25 K infrastructure		\$65,000
2009	Development of Farming in the Watershed curriculum for 4th-8th grades		\$64,300
2011	Construction of Outdoor Classroom (completed in 2013)		\$25,000
2011	Grant for AgPark Education Programs (yr 1 of 5 yrs)		\$72,500
2011	Alameda Creek Watershed Center: Research & Program Recommendations		\$70,095
2012	Grant for AgPark Education Programs (2 yr of 5 yrs)		\$65,000
2013	Grant for AgPark Education Programs (3 yr of 5 yrs)		\$65,000
		Total:	\$426,895



Outdoor Classroom (2014)

tion of an Outdoor Classroom at the AgPark needed to provide protection from summer sun and winter rain for the education programs. The support came in the form of a \$25,000 grant for the design and construction of the ~600-squure foot facility (completed in 2013), as well as the provision of some technical assistance with permitting.

Since 2011, the SFPUC has been focused on the development of the Alameda Creek Watershed Center in Sunol, scheduled to open in 2017. The state-of-the-art Center will enable the SFPUC to provide a wide array of natural resource and education programs for diverse audiences.

The nine-year SFPUC lease with SAGE expires on May 1, 2016, at which time the Watershed Center will be in mid-construction. The SFPUC is now engaged in discussions with SAGE and other prospective Watershed Center partners about collaborations and partnerships for the coming decade.

Ongoing Involvement of the SFPUC Staff in the AgPark

The AgPark is located between the SFPUC corporation yard that serves its 40,000-acre Alameda Creek watershed lands and the Sunol Water Temple, one of the SFPUC's most iconic cultural treasures. As such, there is regular informal in-

Alameda Creek Watershed Center in Sunol and Sunol Water Temple Grounds Restoration

From the SFPUC Website www.sfwater.org

The SFPUC is developing plans to construct the Alameda Creek Watershed Center in Sunol near the Sunol Water Temple as part of its effort to improve its existing facilities in the Sunol Yard. The current plan would include one building and an outdoor watershed discovery trail designed to complement the existing natural and built environment. Construction for the Center is expected to start in – 2016 - 2017, pending project Approval.

The Center would be intended to provide a place for people to:

Gather: *Inside* – Extensive exhibits, meeting room for public use and discovery lab for science exploration; *Outside* – Attractive grounds and native landscaping

Learn about and appreciate the Alameda Creek Watershed, its natural resources, and its role as part of the SFPUC water supply system. Educational programs for school children would also be supported at the Center

Connect with the history of the Sunol Valley

Participate in activities associated with the Sunol Ag Park and volunteer opportunities in the watershed and at the Center

Community Involvement

It is important that community input be reflected in the design and planning of the proposed Watershed Center. In order to accomplish this, the SFPUC has organized a series of community gatherings, materials from which are posted on the SFPUC website.



teraction between the AgPark farmers and various levels of the SFPUC staff.

More official interactions are occasioned, for example, by SAGE's applications for special event permits, requests for review of proposed new farming structures and collaboration on pest issues such as pressures from ground squirrel populations. SAGE staff also attend the periodic community meetings about the development of the Alameda Creek Watershed Center in Sunol.

Assessment and Lessons Learned

Staff from the SFPUC assessed their experience of partnering on the development of the Sunol AgPark and of working with SAGE.

The SFPUC reports that its goals and expectations have been largely met. SFPUC's main goal was to have SAGE educate the public about of the agricultural history of the valley, the Alameda Creek watershed and natural resources issues. They like the fact that SAGE has been creating awareness about whole systems, the connections between: fostering an understanding about watershed stewardship; showing how land relates

Carla Schultheis with the SFPUC Natural Resources and Lands Management Division, and lead staff contact with SAGE, has some thoughts on the partnership:

"The AgPark is unique for us. The lease is quite different from the way we usually do things with its education piece, which was our focus, and its farming operations piece. It is hard and maybe inadvisable - for a bureaucracy our size to do one-offs. From our operations side, we are not set to do things nimbly and the Ag-Park had issues that needed a quicker response than we were able to provide, such as dealing with the infestation of ground squirrels [which took a few months] and hooking up a potable water line [which took about a year]. It would have helped if we had point people within SFPUC identified from the beginning and had scheduled regular meetings."

both to the provision of water and to the growing of food; and demonstrating that sustainable and organic practices are an important component of the foundation of stewardship of land and natural resources.

There were some problematic parts of the partnership. One challenge has been around security. For many years, public access to the areas around SFPUC corporation yard and the Water Temple has been limited to 9 am to 3 pm on weekdays. After hours, access to the AgPark requires entry through a locked side gate, located about a quarter of a mile away from the AgPark itself. Between the AgPark farmers and their workers, over 20 people have keys, but still the side gate has too often been left unlocked or even left wide open for hours at a time when the farmers were expecting visitors who do not have keys.

Another frustration for the SFPUC staff is the fact that in the articles that are regularly written about AgPark, and the SFPUC has not always been acknowledged as a key partner.

On the positive side, the SFPUC appreciates the summaries of the achievements of the education program that SAGE produced for the 2012-13 and 2013-14 fiscal years. Charts showing that SF-PUC grants have supported AgPark field trips for thousands of children mainly from underserved schools, have helped to quantify the benefits of the partnership with SAGE. In turn, the SFPUC has benefited from the positive public relations and good will that has resulted from its support for SAGE's 'Farming in the Watershed' education programs at the AgPark and in schools.

Another AgPark success factor for the SFPUC is the significant enhancement of natural resources on the site. The soil, which was compacted and depleted when the AgPark started, is now permeable, friable, and rich with microbial life. The native habitat hedgerows, diverse organic cropping systems, and habitat structures such as blue-bird boxes and raptor perches, have increased the biodiversity of the site.

Afterword

The Sunol AgPark is a dynamic model. As the real-world AgPark brought to life the blueprint of the vision, principles, goals and strategies on which the model was based, this blueprint and the on-the-ground AgPark operations co-evolved. Solid foundational documents – the lease with SFPUC and License Agreements with farmers – provided room for the Farm Policy and education programs to be developed and refined. The transformation from dry hay field to diversified organic farming operations for multiple farmers and education venue for thousands of students happened in an iterative way, reflective of myriad collaborations.

Many people have shaped the AgPark along the way and what it is today: farmers who have made it their home whether for one year or ten; educators and students who have taught and learned about farming with nature in an urbanedge watershed; partners who have contributed expertise to all aspects of the operation; local farmers and gardeners who have participated in inter-active workshops; Sunol community members who adopted an AgPark corner for their garden; SAGE staff and advisors who celebrated achievements and tackled challenges with like engagement; funders who believed in this model even as it was proving itself; SFPUC staff whose support made the whole enterprise possible; volunteers who contributed sweat equity in heat, rain and on perfect days; journalists, photographers, graphic designers who communicated the beauty and diversity of the AgPark; and thousands of visitors and customers who enjoyed the vitality and tasted the bounty of this rich place.

On March 31 2016, the SAGE lease with the SFPUC for the AgPark expires. Within a year or so afterwards, the long-awaited Alameda Creek Watershed Center will open alongside the AgPark site and will bring thousands of new visitors per month. The SFPUC, SAGE and other partners are now engaged in considering what this next phase for the AgPark should be and how it can best build on the successes of this past decade of partnership.

SAGE continues developing other AgParks and agricultural resource areas within the Bay Area region, in order to provide more opportunities for new farmers, promote viable local agriculture and food systems, and engage the public in the urban-rural linkages that are vital to resilient metropolitan regions.

Appendix

The following appendix materials are located in the supplemental document:

"A Case Study of the Urban-Edge Sunol Water Temple Agricultural Park - Appendices"

SAGE-SFPUC Sunol AgPark Lease w Exhibits including Farmer License Agreement, March 2007

Sunol Water Temple Agricultural Park Management Plan, March 2008

Sunol AgPark Farm Policy, October 2014 Update

Farming in the Watershed Activities Guide, 2011

Sunol AgPark Education Program, Summary of Accomplishments FY 2012-13

Sunol AgPark Education Program, Summary of Accomplishments FY 2013-14

The supplemental appendix document can be located at **www.sagecenter.org** under 'Publications'.

