

California State University San Marcos

# Sustainable Food Project

Liberal Studies Department

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2012

## TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
INTRODUCTION	2
PROJECT INTENT	2
METHODOLOGY	3
<b>RESEARCH</b>	
<hr/>	
BENCHMARKING	5
SURVEY ANALYSIS	6
<b>CONCLUSION</b>	8
<hr/>	
FEASIBILITY	8
SHORT TERM RECOMMENDATIONS	8
LONG TERM RECOMMENDATIONS	9
<b>GARDEN BUSINESS PLAN</b>	10
<hr/>	
DESIGN PLAN	11
FINANCIAL PLAN	13
ORGANIZATIONAL PLAN	14
<b>APPENDICES</b>	16
<hr/>	
I. BENCHMARKING INTERVIEW QUESTIONS	17
II. BENCHMARKING INTERVIEW DATA	20
CALPOLY POMONA	20
FRESNO STATE COLLEGE	21
URBAN ADAMAH FARM, BERKELEY	22
THE BACKYARD PRODUCE PROJECT	23
SAN DIEGO COMMUNITY GARDEN NETWORK	24
III. SURVEY ANALYSIS - STATISTICS	25
IV. SAMPLE WASATCH COMMUNITY GARDENS	38
V. SAMPLE COMMUNITY GARDEN CONTRACT	41
VI. HELPFUL TOOLS	44
VII. MAPPING RECIPROCAL PARTNERSHIPS	45
VIII. RETAIL COST ANALYSIS	46
IX. CASH FLOW WORKSHEET	48
REFERENCES	49

## EXECUTIVE SUMMARY

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This feasibility study was conducted utilizing benchmarking of similar campus and community locations, surveying the current CSUSM student body, and gathering fair market cost data from local retailers. The mission was to develop a cost/benefit analysis of creating a campus community garden and identifying any major barriers or significant benefactors in the development of the Sustainable Food Project (SFP). Using the data gathered we managed to create a three-part business plan to develop a successful, non-profit community garden at CSUSM.

We conducted benchmarking of local southern Californian campuses and public community gardens around San Diego county. The benchmarking provided a clear guideline for what makes a garden successful. The most distinct aspect of the benchmarking process was the realization that the gardening community does not perform like most industries. The community is very cooperative when it comes to helping launch other gardens. Most of this comes from a genuine need for more community gardens in San Diego County. Long wait lists prove frustrating for the hundreds of do-it-yourself farmers around the county.

Through the successful implementation of a campus survey we were able to determine how interested students were in the pursuit of a CSUSM campus garden. The data collected defined a clear desire for the existence of a campus garden. The most common reasons listed included education, purchasing fresh produce, community outreach, and saving money. An engaging statistic was that a majority of people interested in the SFP preferred to volunteer their time rather than rent out a specific plot. From a retail standpoint, such volunteer efforts will be key to the SFP's success.

The SFP's retail costs were prohibitively expensive. Yet, assistance from local organizations and government grants reduce the barriers to the creation of the campus community garden. Through contacting organizations such as the San Diego County Farm Bureau and Seeds in the City, we found many references for locations to obtain free materials such as soil and fertilizer, thereby reducing costs drastically. Such collaboration is pivotal in the success of any publicly managed community garden.

## **INTRODUCTION**

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Community gardens and urban farming are grass roots causes forming the backbone for delivering food justice education to society. Few people today know from where the food in their grocery store originates. The industrial agricultural industry is not required to disclose transportation methodology to the consumer. Customers are unaware of what pesticides and contaminants are used on the crops they consume. Genetically modified foods remain unlabelled in the United States.

Community gardens seek to educate society in methods of clean living and providing one's own food. Through the use of urban farming, consumers can grow their own crops and be acutely aware of what methods were used in their creation. From initial steps of purchasing organic seeds and sowing them at the appropriate times to reaping the rewards of your own organic food on the dinner table, community gardens are ideal locations to improve society from the ground up.

Community gardens also provide neighborhood improvement and a sense of community and involvement with nature. They function publicly in sense of ownership, management, and access. They can alleviate undeveloped urban sprawl by turning it into a functional community hub of teamwork and nature. Community gardens are also a way to individually combat climate change. Any trees planted to provide aesthetics, a natural barrier, or even shade also help reduce local carbon dioxide emissions.

## **PROJECT INTENT**

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The California State University San Marcos' SFP intends to create a campus community garden for the purposes of education, food justice, and community involvement. Through the Liberal Studies Department, classes are to be offered in the study of community agriculture and global food security. The CSUSM SFP intends to utilize the campus community garden to offer raised plots to CSUSM students, students that live in the dormitory, and local citizens.

## METHODOLOGY

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- I. Benchmarking Interviews
  - II. Campus Student Survey
  - III. Retail Data Compilation
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I. A series of interview questions were compiled by each of the project members to ensure a wide array of pertinent, similar data was collected from each location interviewed. Once a comprehensive list was developed, it was groomed for redundancy, relevance, and timeliness. Each member of the project team compiled a list of fifteen questions which were then submitted to the faculty advisor, Professor Alan Omens. Once his feedback was received, the list of questions was modified and presented to the project sponsor, Professor Greig Guthey, the Assistant Professor of Public Policy for the Liberal Studies Department. After a final list was given clearance from the project sponsor, we assigned locations to each team member based upon individual preference, previous contact, and geographic location.

Team Member	Community Garden Locations Interviewed
Braden, Daniel	Urban Adamah Farm, Golden Hills Community Garden, San Diego Community Garden Network, San Diego City College
Dehesa, Alan	Seeds in the City, Backyard Produce Project, San Diego Farm Bureau, University of California Irvine, San Marcos Community Garden
Mikulak, Ryan	CalPoly Pomona, CalPoly San Luis Obispo
Mroska, Tracy	Fresno State Alluvial Community Gardens, San Diego Roots
Woody, Ronald	Attended a symposium held by the San Diego Center for Sustainability

Each benchmark target was then interviewed and the relevant data was compiled and summarized for presentation to the group. Relevance of data was determined by comparing initial startup costs and annual operating budget of each individual garden/farm interviewed. The summarized results have been utilized to create the business plan and are included in appendix II for completeness.

II. Similar to the compilation of interview questions for the benchmark candidates, the survey questions were submitted by each member of the project and included according to

relevance and statistical significance. Once the survey questionnaire was completed and cleared by professor Greig Guthey, it was submitted to Patricia Morris with the CSUSM Institutional Planning and Analysis office. Morris then utilized standardized policies for proctoring the survey. The survey was sent via email to every 20th student on the CSUSM campus. Of the total 500 students surveyed, there were 63 respondents giving a response rate of approximately 13% (0.003% of campus population). Once completed, the data was returned to us for analysis and inclusion in this report. Ryan utilized IBM's Statistical Package for the Social Sciences (SPSS) program to generate t-values and determine statistical significance. The SPSS results are included in appendix III.

III. Members of the project pulled data from local San Diego County retail suppliers of garden relevant materials for inclusion in the report. These numbers were utilized to create a base cost figure for comparison of cost saving methods and contacts. Retail prices for building supplies and tool sheds were collected online from local Lowes and The Home Depot locations. Fencing prices were collected from garden-fencing.com, an online retailer of garden and farm fencing supplies. Lumber prices were collected from J&W Lumber, a local lumber production company. Soil prices were obtained from soildirect.com. Competitive pricing for irrigation systems was researched from rainbird.com and sprinkler.com. Ed Johnson, Director of the CSUSM Sustainability and Utility Services Office, helped provide the cost of water on a per semester basis.

See appendix VIII for the list of retail costs and an analysis of costs on a total and per plot basis.

## RESEARCH - BENCHMARKING

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Benchmarking is the process of comparing one's processes and methods to those best practices of leading firms in the industry or competing industries. The normal measurements of quality, time, and cost applied equally to the community garden industry as it would more competitive industries. As fixed and unexpected costs can doom an unprepared garden planner, the comparison of best practices to avoid such downfalls is imperative. The key indicators we used to determine comparability were startup costs and the annual operating budgets of each garden plan. Those plans with the least costs and most efficient operating budgets were utilized to design the business plan in this report.

All of the community gardens' start-up costs were funded through donations and/or grants, and volunteer labor. The annual operating budget of each community garden is funded through donations, grants, volunteer labor, and/or plot fees. For example, the Urban Adamah Farm has an annual operating budget of \$400,000 of which \$350,000 is covered by grants. Plot fees can vary considerably and can be reduced by funding through grants and donations. Most of the community gardens donate the produce to different organizations, while Cal Poly Pomona sells their produce through different venues such as farmers' markets and restaurants. Each community garden is heavily involved with the community, and those that do not officially provide classes have other methods of informing and educating their community garden members, such as newsletters and meetings. Below is a comprehensive table comparing each of the community gardens/farms we interviewed. For more detailed information on the most applicable community gardens, please see appendix II.

Community Garden	Startup Costs	Annual Operating Budget	Sponsored by Grants	School Affiliation	Charges fees	Provides Classes	Donate/Sell Produce
Cal State Polytechnic University, Pomona	N/A	N/A	√	√		√	√
Alluvial Community Gardens	Negligible	<\$45 per plot		√	√	√	
Urban Adamah Farm, Berkeley	\$80,000	\$400,000	√			√	√
Backyard Produce Project	Negligible	Negligible		√			√
San Diego Community Garden Network	\$10,000	\$2,000	√		√		√
San Diego City College	Declined Interview	N/A					
University of California Irvine	Substantial	Information Unavailable	√	√	√	√	√
Seeds in the City	Negligible	Negligible					√
Golden Hill Community Garden	Information Unavailable	N/A			√		
San Diego Roots	N/A	N/A	√	√		√	
San Marcos Community Garden	N/A	N/A		√	√	√	

## SURVEY ANALYSIS

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To determine project feasibility, it is important to survey the campus population to establish student interest in the SFP. Any community garden endeavor would be impossible to sustain without support of the students. The project administered a brief, nine-question survey to ascertain the interest level of the student body. The survey was E-mailed systematically to each 20<sup>th</sup> student out of a total of 20,000 for a potential 500 student sample. It was also important to identify individuals who would be interested in participating in the garden whom could be used as resources when members are needed and the survey was written to identify how many volunteers could be expected.

The survey ran for three weeks and yielded 63 respondents. All of the respondents were students of which 64% showed an interest in growing their own vegetables in a campus community garden. This majority identified a moderate level of interest in gardening. Of those respondents who did not show an interest, 75% were unavailable due to time constraints. The survey seemed to promote a moderate level of interest in gardening at CSUSM. One interesting



statistic is that of the remainder of students disinterested in gardening, a majority still supported the concept of a campus community garden.

The survey revealed that respondents show a plethora of reasons for why they are interested in organic gardening. The most common reasons are saving money, education, access to fresh vegetables, enjoying favorite foods, socializing, community outreach. Having access to fresh produce and learning about gardening were the two areas with the strongest results. These results are enhanced by the nearly 100% interest in buying produce grown by students. There was not a large deviation among the other categories. This data suggests that students recognize and are interested in benefiting from the many different values that come from gardening.

According to the survey, students are willing to participate in gardening as plot owners, volunteers, and donors. The heaviest results were in the area of volunteering time to the garden. Students who would be willing to participate in a community garden are nearly equally likely to be involved as an individual, with family, friends, and group/organization. Members are likely to bring family or friends and enjoy working in the garden with professional organizations. The respondents interested in gardening are most likely to commit 1-2 hours per week. Of the 63 students who took the survey, twenty students provided their E-mail address to be updated with the progress of the community garden. These addresses are provided in the appendix.

If the survey is a statistically relevant sampling of the student body, it is likely that the campus is in favor of a community garden. Cultural changes in favor of eco friendly, self-sustaining practices may have played a role in forming the strong opinions about gardening by students. The survey shows some students prefer to garden and become further educated in gardening methods. Other students like the perks of having fresh produce, socializing, and saving money while practicing self-sustaining practices and enjoying the outdoors. A majority of non-gardeners support the garden and nearly all of the students surveyed would buy fresh produce grown by students. While these conclusions may not be statistically relevant given such a small sample size, additional testing should be done in future semesters to better ascertain the level of anticipated involvement.

Please see appendix III for more information regarding the campus survey.

## CONCLUSION

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### FEASIBILITY

After having conducted benchmarking interviews, a campus survey, and compilation of relevant community garden operating and setup costs, we have found that the creation of a CSUSM community garden is feasible. Such an assessment relies on adequate fundraising of community donations and federal as well as state grants. Operational costs can be maintained from semester to semester via individual and group plot fees; however, additional influxes of grant and donation money will be required on a regular basis. For this point, the SFP managerial organization must maintain a continuous fundraising capability.

Community gardens live and die by the interest of the community. Without student, faculty, and local community support, the SFP will not be able to sustain itself. The following is a list of recommendations, both short and long term, for the creation, management, and implementation of a campus community garden for CSUSM.

### SHORT TERM GOAL RECOMMENDATIONS

- Hold a "kick-off" meeting to raise awareness and drive collaboration. Such a meeting can provide valuable contacts within the local community for fundraising purposes.
- Apply for federal and state grants. Be specific in the costs associated with the garden so as to ensure the grants are for appropriate amounts.
- Organize interested community partners to expand support for the garden which can lead to donations of materials, time, and labor.
- Organize an on campus focus group. This is to help promote awareness of the garden and create a network of people who are interested in being involved.
- Establish a student governed organization with oversight from ASI.
- Contact Eric Larson with San Diego Roots to promote the SFP through interviews and free publicity in their electronic newsletter.

- Contact the following business/organizations for free and/or discounted materials:
  - El Cajon City Dump (compost donation)
  - Mountain Meadow Mushroom (compost donation)
  - Bee Wise Farm: Bill Brammer (soil donation)
  - Miramar Wholesale Nursery (soil donation)
  - Walter Anderson Nursery (seed donation)
  - J&W Lumber (5% school discount)
- Communicate with the art department in creating art projects that can be incorporated in the garden. These projects can consist of painted benches, sculptures, etc.

#### LONG TERM GOAL RECOMMENDATIONS

- Seek expansion of the student organization that was formed.
- Create a food donating project that directly impacts the students and or community in need.
- Create programs that help educate individuals about the food justice issues in North County.
- Grow food bearing plants in the common areas that can help feed the community.
- Expand the garden by increasing the number of plots.
- Work on the aesthetics of the garden area. Create a permanent parking area, walkways, and communal areas.
- Expand SFP awareness through meetings, celebrations, and events on campus.

# **SUSTAINABLE FOOD PROJECT - BUSINESS PLAN**

## **I. DESIGN PLAN**

## **II. FINANCIAL PLAN**

## **III. ORGANIZATIONAL PLAN**

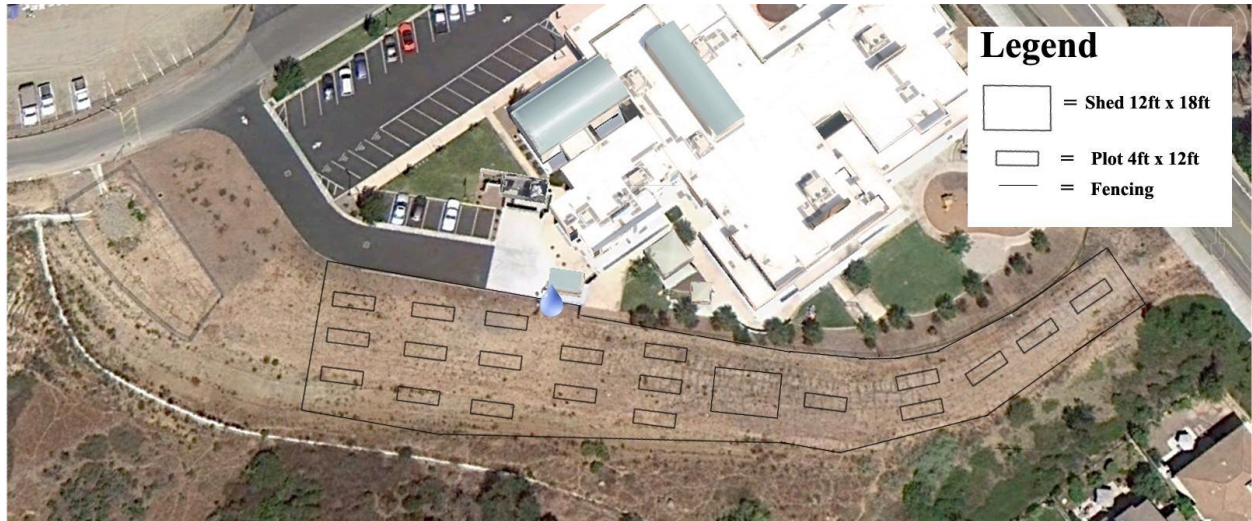
## DESIGN PLAN

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In order to take advantage of economies of scale, a minimum of 20 plots sized 4x12 feet has been used as the primary community garden layout. A test run of any fewer than 20 plots will most likely create undue expenses in both material and labor costs. All labor costs are calculated at the California State minimum wage as of April 2012 and will utilize a crew of no less than eight workers. Listed here are the startup costs on a "per plot" basis. All of the below costs are at retail, fair value prices. As the chart shows, community gardens exist because of donations from the public and gardening organizations.

Expense Unit		Total
Lumber	2"x12"x12' ; 2"x4"x8' ; 4"x4"x8'	\$210
Irrigation	Drip	30
Soil		355
Fertilizer	Local farm manure	19
Wood Screws	3.5"	8
Staples		1
Poultry Wire		11
Labor	30 work hours, 8 workers	240
<b>Total</b>		<b>\$874</b>

According to Tristan Nicholls, the Division President of Landscape Development, fencing is of primary concern (personal communication, March 24, 2012). Deer and other animals are a constant menace to community gardens. Adequate fencing can be ordered online and will cover a 667 square foot area for about \$3,320 ([garden-fencing.com](http://garden-fencing.com)). The above stated poultry wire is utilized beneath each planter to protect from burrowing rodents such as moles and gophers. The photo below is an example of the community garden layout. As can be seen in the photo, there is still plenty of space for parking on the western side of the garden.



The total price to create a 20 plot community garden at retail costs is over \$20,800. Complete calculations can be found in the appendix VIII.

## FINANCIAL PLAN

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As evidenced by benchmarking trends in the community garden sector, the key to a successful community garden or urban farm is the receipt of grants, donations, and materials from outside organizations. When planning the annual operating budget, one must account for shortfalls in community aid to ensure that the associated plot fees are sufficient to cover said shortfalls. Conversely, the planning council must ensure that the fees are not inflated to the point of placing undue hardship on prospective gardeners. As such, this plan will concentrate on determining what amount of funding should come from grants and donations versus fees and dues. All calculations will be on a "per plot" basis for each semester.

Expense Unit	Retail Prices	Donation Pricing
<b>Fixed Costs</b>		
Water	\$10	\$10
Soil (Replaced every 2 years)	90	~0
<b>Variable Costs</b>		
Fertilizer	20	~0
<b>Totals</b>	<b>\$120</b>	<b>\$10</b>

As it is quite apparent, plot fees can vary wildly depending upon whether management is capable of obtaining donated soil and fertilizer each semester. Water and fertilizer cost is determined based upon cultivation of high water usage plants, i.e. lettuce or asparagus. Depending upon usage, repairs will need to be made upon the individual planters on a need by need basis. Individual planter repair estimates, such as lumber, soil, and fertilizer replacement as well as new planter costs can be found in the design section as well as appendix VIII. The entire cash flow summary can be found in appendix IX.

## ORGANIZATIONAL PLAN

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Most community gardens have a board of directors or similar elected council for management and decision making. The board should be formed of an elected president and treasurer as well as additional members such as a secretary and human resource manager to coordinate donation receipts. The board's primary responsibilities will be to conduct fundraisers, recruit gardeners, write and manage gardener agreements, collect fees, and perform on-site management. In addition, the board should abide by an established set of procedures to ensure effective decision making. Such a document should effectively function as a constitution for the organization and SFP as a whole.

The established organizational rules will include rules and policies to cover: fees, plot maintenance, separation and disposal of waste, composting, drugs, alcohol, guests, children, pets, respect, common-space maintenance, volunteer hour requirements, attendance, and care and storage of common tools. The rules should include consequences of breaking rules and procedures as well. Effective communication is important to ensure the gardeners stay connected and build a sense of community around the garden. This can be done via information meetings, a regular newsletter, and electronic media. Such meetings should stress rules and regulations but also foster a community of respectful gardeners.

The Associated Students, Inc. (ASI) executive member board of the spring 2012 term has expressed interest in creating a division of ASI to function as the board of directors for the SFP. The ASI is a student run organization responsible for functions and events around campus. Such a board of directors under the ASI would require further approval from the ASI board of directors. The outgoing president, Travis Wilson, has pledged to pass on this recommendation to the fall 2012 executive board for further investigation. Any board formed by the ASI would be primarily constituted of students and campus personnel. This will ensure continuity of leadership during the transition between semesters.

Utilizing the ASI or a similar organizational structure is beneficial because it guarantees a continuous managerial entity for the garden. Without such an entity, the garden would be



subjected to swings in policy depending upon whom within the Liberal Studies Department was leading the project at any given time. It also insures against the liability of losing a leader to circumstance by having a documented system in place to deal with such inevitabilities. Lastly, having a student-led organization will help maintain continuous interest in the garden through the creation of events and sponsored celebrations. At many campus community gardens interest in the garden starts strong, but as the semester progresses it begins to lag. The organization is aptly positioned to provide morale boosting contests and ceremonies.

The ASI can be contacted via phone at (760) 750-4900. They should be contacted as soon as possible in the semester as their board of directors meetings are limited and obtaining a spot on the agenda is key to determining the level of support they can provide for organizing a managerial/oversight board for the SFP.

## Appendices

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I. Benchmarking Interview Questions

II. Benchmark Interview Data

III. Survey Analysis - Statistics

IV. Sample Wasatch Community Gardens

V. Sample Community Garden Contract

VI. Helpful Tools

VII. Mapping Reciprocal Partnerships

VIII. Retail Cost Analysis

IX. Cash Flow Worksheet

# Appendix I: Benchmarking Interview Questions

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## **Benchmarking Interview Questions**

### **Introductory/background questions:**

What is the purpose of your garden?

Do you have a mission or vision for the garden?

How many gardeners do you have?

How long have you been around?

Is this your first location? If not, what caused you to move?

How has the garden changed since it was started? (Try to get a feel for their garden and the direction it is headed in.)

### **Financials**

#### Start Up

When you first started the garden, did you survey the area to see if people/students had interest in a community garden?

If so, what types of questions did you ask?

Did you involve interested people from the beginning or set up the garden first and then find gardeners?

What were your startup costs and what were they related to?

How did you pay for all that?

#### Sustainability

What are your annual operating costs and what do they involve? (if they say, “what do you mean?” prompt them by saying: we are interested in any ongoing maintenance costs, water costs, etc.)

Is your garden self-sustaining or does it require outside funding?

What strategies have enabled you to make the garden self-sustaining?

Where do you get the majority of your funding (public or private)?

Are these grants? In-kind contributions? Ongoing sponsors/donors? Etc.

Do you sell any produce?

If so, where and how much?

Do you donate produce to any organizations?

### Partnerships and Sponsors

Did you at first and/or do you now partner with any other organizations in the implementation and/or operation and maintenance of your garden?

How did you initially raise awareness of your garden when it first opened?

In what sorts of ways do you continue to advertise or otherwise maintain awareness of the garden?

If you have sponsors for the garden then how do you recognize their support for the garden?

What are your most valuable community alliances or partnerships?

### Legal

What state, local, or federal regulations should we be aware of in implementation of a community garden?

Do you foresee any future governmental regulations becoming an issue with the implementation and management of a community garden?

Have there been any problems with the city, health department, neighbors, or anyone else?

What were they? How did you handle them?

(For those that do sell at farm stands on site, or farmers markets, explain the regulations they encountered in setting up this part of their garden. There are likely different issues with respect to an onsite farm stand vs. a farmers' market stand.)

### Design

What kind of area have you found to be the best location?

What are major property features are important?

What size are your garden plots (sizes, plants, fertilizers allowed) and do you offer larger and smaller plots?

How do you provide irrigation for your garden?

Did you provide soil for the garden plots initially or did you leave the soil improvement etc to the gardeners? What type of soil do you utilize?

Do you provide seed, hardware or tools, and educational services at your garden?

If so, what details can you give about the implementation of such services? Were there any challenges and how did you address them?

Do you require members of the garden to pay fees or do you rely on member donations?  
How long is a typical member plot rented (month, semester/6 months, 1year)?  
What kind of security measures do you have in place?  
What are the rules and regulations surrounding the garden?  
Do you have plans for further expansion?  
How did you involve community gardeners in the design and development of the garden?  
What recommendations would you give to someone designing a new community garden given your experience.

### **Organization and Management**

Do you have an organization that runs the garden?  
What are some of the key policies and common practices you have in place?  
Can we have a copy of your leasing contract?  
What type of people make up your community garden membership? (student, staff, etc.)  
Is the garden running at 100% capacity? (Year-round, etc?)  
How long is your waiting list and how long do people have to wait before there is an opening?  
How have you integrated the responsibilities of a garden into your campus?  
Have abandoned and untended plots been big problem?  
What level of interest have your students exhibited towards gardening?  
Do you see a lot of families gardening?  
How have you addressed issues of theft if any in the garden? What level of student involvement does the garden require to be maintained?  
If the garden is associated with a college, what kind of support do you receive from the college, if any?

### **Wrap Up Topics**

What were major undertakings necessary to making the garden a reality?  
If given the opportunity start over, what would you do differently?  
Were there any surprises that blindsided you in the development of the garden?  
What were they and how did you handle them?

**Don't forget to graciously thank them for their time and ask them if it is ok to contact them if you have additional follow up questions.**

## Appendix II: Benchmark Interview Data

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### CALIFORNIA STATE POLYTECHNIC UNIVERSITY, POMONA

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Cal Poly Pomona is heavily involved in educating students in all areas of agriculture. Their extensive agricultural programs offer courses in plant, animal, and food sciences as well as agribusiness food industry management. Cal Poly Pomona's organic farm is certified by California Certified Organic Farmers with “the primary mission of providing undergraduate students a place to experience hands-on learning in organic and sustainable farming and gardening practices” (Cal Poly 2012). Cal Poly Pomona's 11-acre farm provides enough produce to sell in several different local events such as farmers' markets and garden events. Vegetables are also sold to restaurants which gives students contact with business professionals. The farm also benefits other courses such as lab research programs.

Development and management of a farm this large is very expensive and labor intensive. Cal Poly Pomona's organic farm is funded by the Horticulture and Crop Science Department, the College of Agriculture, the Food and Environmental Sciences Department, in addition to grants and private donations (Cal Poly 2012). Heavy equipment is used to prepare and maintain the land and as such, the Cal Poly farm is not a profitable or self-sustaining endeavor. Its strengths lie in the value it provides in the ability to unite students, teachers, and the community with better farming practices. It is a classroom for students to gain experience in working with a farm in order to better prepare themselves for their careers. Cal Poly Pomona has created an active club for dedicated students to run their 11-acre farm. Members are given the opportunity to compete in marketing competitions, attend industry conventions, and network with agribusiness professionals. While the costs associated with running a farm of this size are outside the scope of this study, the intent behind their program is relevant to CSUSM's needs.

**Startup Costs:** Substantial (not estimated)

**Annual Operating Budget:** Unknown (information unavailable)

## FRESNO STATE COLLEGE

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While Fresno State College does not have a campus community garden, they do coordinate an "Alternative Spring Break". This spring break is a program that involves students in activities to help the community. According to Mellissa Jessen, the assistant director of the Jan and Bud Richter Center for Community Engagement and Service-Learning (personal communication, February 24, 2012), these activities are selected by the students and the selection for 2011 was the Alluvial Community Garden. Fresno State students helped to build the initial planters for the Alluvial Gardens in Clovis, CA (Facebook, FresnoStateASB 2012). During the project, they built six redwood planters, each measuring 4x12 feet. The project lasted four days in which the students also helped to install the irrigation and began a compost.

The Alluvial Community Gardens (ACG) have an advisory board for fund raising and coordinating volunteers. Interns from Fresno State's campus were also actively involved in raising funds for the project. All of the mulch and lumber for the project came from donations. Its current organization calls for having gardeners pay \$2 monthly to utilize the community garden. Priority is given to those who do not have yards but each gardener is considered on a case by case basis. It is the intent of the ACG to begin facilitating classes on organic gardening.

**Startup Costs:** Negligible (donated materials and volunteer gardeners)

**Annual Operating Budget:** < \$45 per plot (estimated)

**\*Note:** Most of the ACG's materials are received via donations on an "as-needed" basis.

## URBAN ADAMAH FARM, BERKELEY

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The Urban Adamah Farm in Berkeley is a bay area center for students and community members. The purpose of the farm is to grow food for those in need, serve as an educational center for the community, and provide a training ground for young Jewish adults. According to Adam Berman, the farm's executive director, the 1.2-acre Urban Adamah Farm currently operates with one full-time farmer and 12 temporary farmers who work for 3 months at a time (personal communication, February 29, 2012). The farm completed start up activities in February 2011 and has been providing educational and community services ever since. What was initially a vacant lot was turned into an urban farm over a period of eight months. The initial costs were covered by foundation grants and through individual donations and gifts. During startup, Berman surveyed community members and students to gauge interest in the community garden. Once interest in the project was confirmed, he hired a master gardener named Tali Weinberg before selecting the garden's future location. With Weinberg's assistance, the urban farm was eventually placed in a vacant lot on Parker Street in Berkeley.

The annual budget is provided almost entirely by fundraising and grants. While the farm does not sell any of the food it generates, it does donate produce to the Lifelong Medical Center, the North Berkeley Food Bank, the Covenant Ministry Church, and its own internal food bank. The only forms of advertisement the farm utilizes is through word of mouth and a routinely updated Facebook page. To minimize costs, the farm utilizes a drip irrigation system and gathers soil and other supplies through donations and grant purchases. One interesting feature is that the garden *does not charge any usage fees* relying solely on the fundraising previously listed.

**Startup Costs:** \$80,000 (provided by grants and donations)

**Annual Operating Budget:** \$400,000 (\$350,000 via grants)

**\*Note:** The farm still requires outside assistance for funding and is in no way self-sustaining.



## **THE BACKYARD PRODUCE PROJECT**

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The Backyard Produce Project was started in spring of 2009, when a school counselor told a community group meeting in Penasquitos about the increasing number of children at school whose families were struggling financially and could not afford healthy food. Jane Radatz, the manager of the Backyard Produce Project, stated that the initial idea was to ask people that had extra citrus on their trees to make a donation (personal communication, February 27, 2012). She set up a monthly donation site and then gradually added more locations as the project increased in size. Eventually, people began asking the project if they could pick up the spare fruit and that is when things dramatically increased in scope. Radatz explained that they organized a small team of volunteers that were willing to make the pickup runs.

Sunshine Care Assisted Living, in Poway, offered a plot of undeveloped land on their grounds for the project to create a community garden. The garden was set up and operating by spring of 2010. Since then, two student groups have added a second garden adjacent to the project's with a third planned for immediate setup. All of the project's gardens are tended by volunteers and all produce is donated to the project. The project then donates the produce collected to Friends and Family Community Connection, a local charity that distributes the food to families in need.

**Startup Costs:** Negligible (Most materials and land were donated to the project)

**Annual Operating Budget:** Negligible (The project operates primarily through donations and volunteer labor)

## **SAN DIEGO COMMUNITY GARDEN NETWORK**

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The San Diego Community Garden Network is a collaboration of several master gardeners around San Diego County. Their goal is to organize all of the community gardens in the network so as to provide easier access to the educational, nutritional, and community resources they provide. According to Paul Gray, coordinator with the San Diego Community Garden Network, the specific garden that he manages has been around for approximately six years (personal communication, February 28, 2012). It utilizes 30 gardeners to provide a peaceful place to meet neighbors, experience nature, and enjoy the diversity of life. Gray goes on to explain that each garden's purpose is to provide members with an opportunity to grow their own vegetables, flowers, and herbs. They strive to share organic techniques that promote healthy gardens through individual and cooperative gardening, meetings, and shared information.

Gray's garden is currently self-sustaining due to a combination of volunteer help, a volunteer governing board, and donations from the community and interested businesses. The majority of the garden's funds are derived from garden dues. The garden does not own its own plots and does not sell any produce. Gray explains that when the garden does have extra herbs, they are usually donated with such decisions handled by a five-member board of directors. The board is extremely important because it prevents the garden from being dictated by any one individual.

**Startup Costs:** \$10,000 (The San Diego City Council assisted the initial funding)

**Annual Operating Budget:** \$2,000 (including water and insurance)

## Appendix III: Survey Analysis

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### Statistics

		Q2	Q3	Q4	Q5	Q6	Q7	Q8
N	Valid	63	23	161	64	39	39	38
	Missing	99	139	1	98	123	123	124
Mean		1.37	2.65	3.58	2.14	2.49	2.15	1.03
Median		1.00	3.00	3.00	2.00	3.00	2.00	1.00
Mode		1	3	1	2	3	2	1
Std. Deviation		.485	.832	1.989	1.006	1.073	.745	.162
Variance		.236	.692	3.957	1.012	1.151	.555	.026
Percentiles	25%	1.00	3.00	2.00	1.00	2.00	2.00	1.00
	50%	1.00	3.00	3.00	2.00	3.00	2.00	1.00
	75%	2.00	3.00	5.00	3.00	3.00	2.00	1.00

### Frequency Table

#### Question 2

If there were an organic community garden on campus, where you could grow your own fruits and vegetables, would you be interested?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	40	24.7	63.5	63.5
	NO	23	14.2	36.5	100.0
	Total	63	38.9	100.0	
Missing	System	99	61.1		
Total		162	100.0		

### Question 3

Why are you not interested in gardening?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Interested	4	2.5	17.4	17.4
	Don't Care	1	.6	4.3	21.7
	No Time	17	10.5	73.9	95.7
	Other	1	.6	4.3	100.0
	Total	23	14.2	100.0	
Missing	System	139	85.8		
Total		162	100.0		

### Question 4

Why are you interested in a community garden? (check all that apply)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Access to Fresh Vegetables	35	21.6	21.7	21.7
	Community Outreach	20	12.3	12.4	34.2
	Learn About Gardening	26	16.0	16.1	50.3
	Save Money	27	16.7	16.8	67.1
	Socializing Recreation	19	11.7	11.8	78.9
	Grow Culturally Favorite Foods	17	10.5	10.6	89.4
	Enjoy Gardening	17	10.5	10.6	100.0
	Total	161	99.4	100.0	
Missing	System	1	.6		
Total		162	100.0		

**Question 5**

How would you participate in our community garden? (check all that apply)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Gardener of a specific plot	19	11.7	29.7	29.7
	Volunteer time	26	16.0	40.6	70.3
	Donate Money Supplies	10	6.2	15.6	85.9
	Not interested	9	5.6	14.1	100.0
	Total	64	39.5	100.0	
Missing	System	98	60.5		
Total		162	100.0		

**Question 6**

If you were to grow organic food in a designated plot would you be more likely to do it as

a:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Group	9	5.6	23.1	23.1
	Organization				
	Family	10	6.2	25.6	48.7
	Individual	12	7.4	30.8	79.5
	With Friends	8	4.9	20.5	100.0
	Total	39	24.1	100.0	
Missing	System	123	75.9		
Total		162	100.0		

**Question 7**

How much time do you currently spend or would you be willing to spend working in a community garden?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I won't work in a garden	5	3.1	12.8	12.8
	1-2 hours/week	26	16.0	66.7	79.5
	3-4 hours/week	5	3.1	12.8	92.3
	5+ hours/week	3	1.9	7.7	100.0
	Total	39	24.1	100.0	
Missing	System	123	75.9		
Total		162	100.0		

**Question 8**

If you don't want to work in a garden would you be interested in buying fresh produce that was grown by students?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	37	22.8	97.4	97.4
	No	1	.6	2.6	100.0
	Total	38	23.5	100.0	
Missing	System	124	76.5		
Total		162	100.0		

## T-Test

**One-Sample Statistics**

	N	Mean	Std. Deviation	Std. Error Mean
Q2	63	1.37	.485	.061
Q3	23	2.65	.832	.173
Q4	161	3.58	1.989	.157
Q5	64	2.14	1.006	.126
Q6	39	2.49	1.073	.172
Q7	39	2.15	.745	.119
Q8	38	1.03	.162	.026

**One-Sample Test**

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Q2	22.325	62	.000	1.365	1.24	1.49
Q3	15.294	22	.000	2.652	2.29	3.01
Q4	22.860	160	.000	3.584	3.27	3.89
Q5	17.026	63	.000	2.141	1.89	2.39
Q6	14.477	38	.000	2.487	2.14	2.83
Q7	18.061	38	.000	2.154	1.91	2.40
Q8	39.000	37	.000	1.026	.97	1.08

## Frequency Pie Graphs

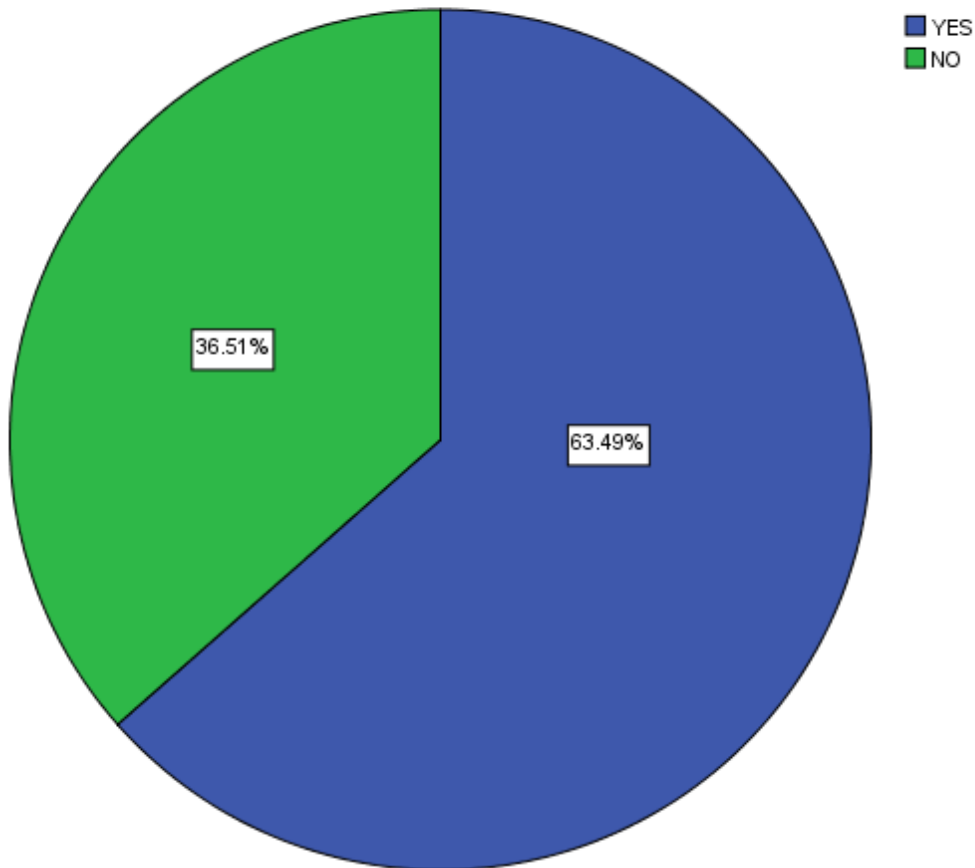
### Statistics

		Q2	Q3	Q4	Q5	Q6	Q7	Q8
N	Valid	63	23	161	64	39	39	38
	Missing	99	139	1	98	123	123	124
Mean		1.37	2.65	3.58	2.14	2.49	2.15	1.03
Median		1.00	3.00	3.00	2.00	3.00	2.00	1.00
Mode		1	3	1	2	3	2	1
Std. Deviation		.485	.832	1.989	1.006	1.073	.745	.162
Variance		.236	.692	3.957	1.012	1.151	.555	.026
Percentiles	25%	1.00	3.00	2.00	1.00	2.00	2.00	1.00
	50%	1.00	3.00	3.00	2.00	3.00	2.00	1.00
	75%	2.00	3.00	5.00	3.00	3.00	2.00	1.00



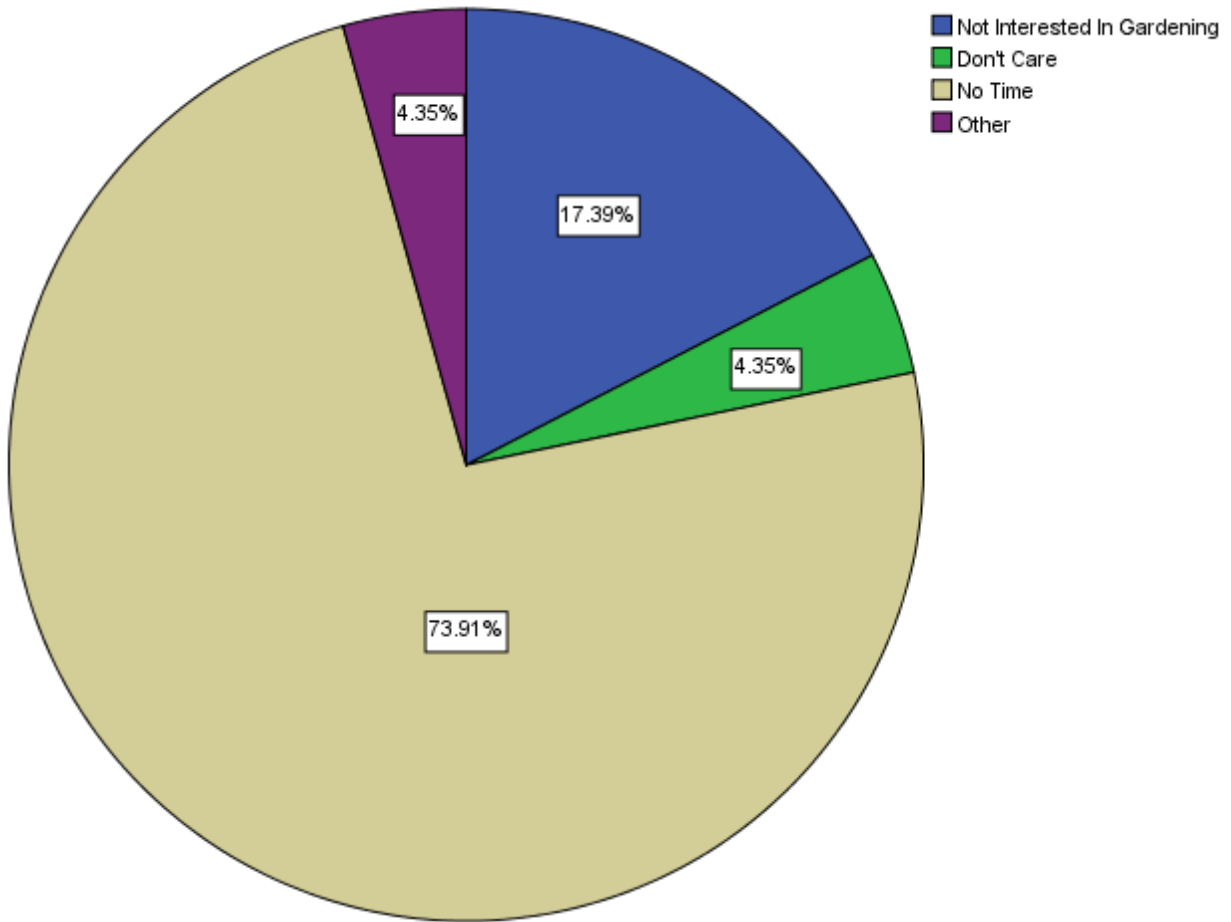
## Pie Charts

2. If there were an organic community garden on campus, where you could grow your own fruits and vegetables, would you be interested?



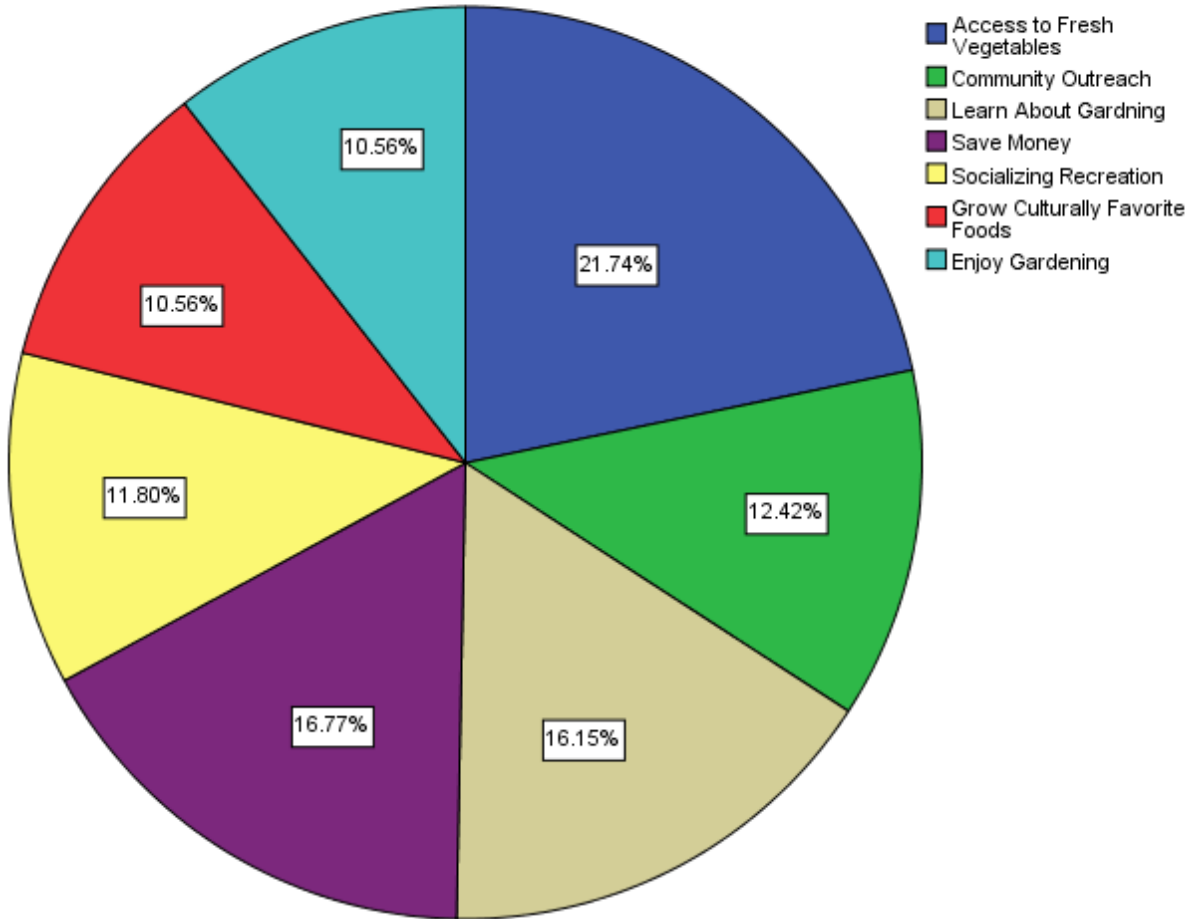
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	40	24.7	63.5	63.5
	NO	23	14.2	36.5	100.0
	Total	63	38.9	100.0	
Missing	System	99	61.1		
Total		162	100.0		

### 3. Why are you not interested in gardening?



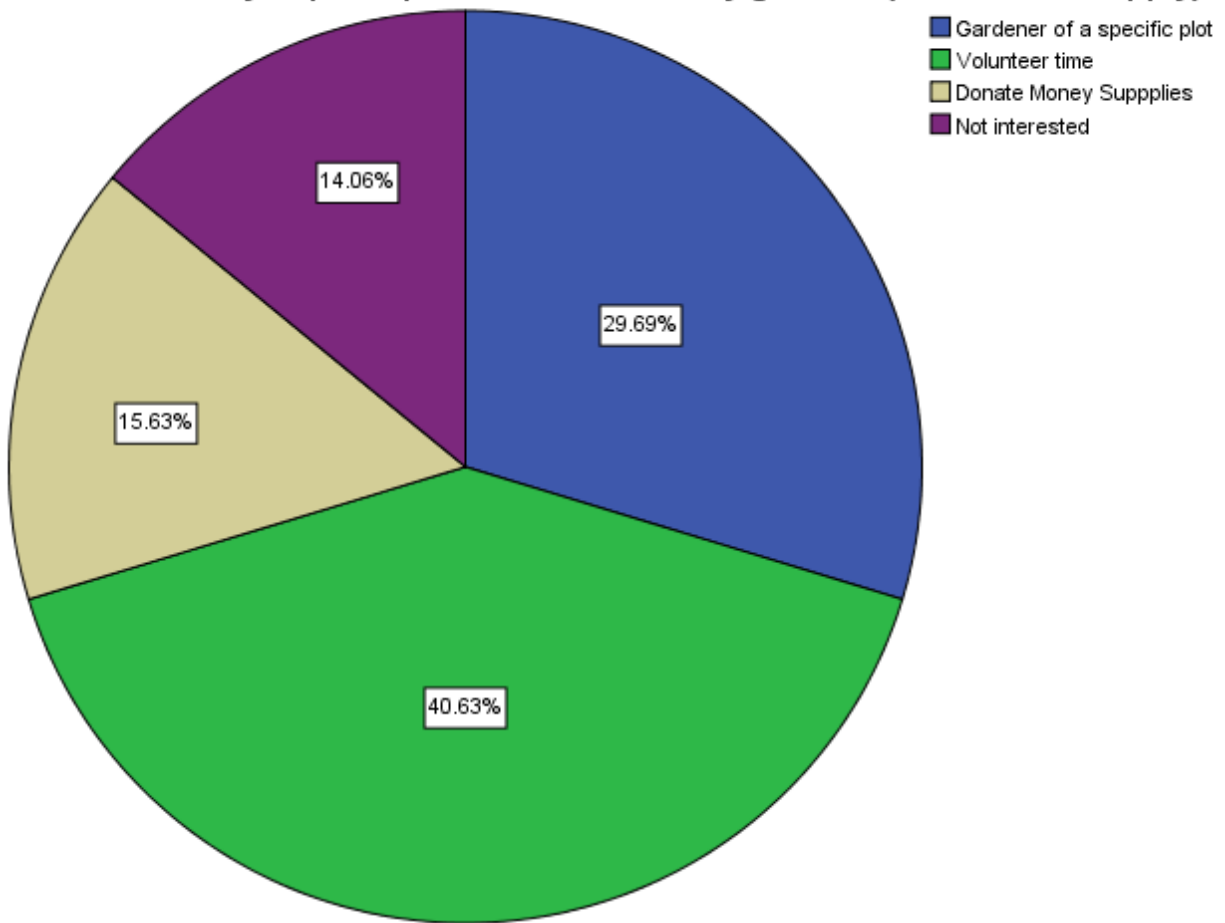
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Interested In Gardening	4	2.5	17.4	17.4
	Don't Care	1	.6	4.3	21.7
	No Time	17	10.5	73.9	95.7
	Other	1	.6	4.3	100.0
	Total	23	14.2	100.0	
Missing	System	139	85.8		
Total		162	100.0		

4. Why are you interested in a community garden? (check all that apply)



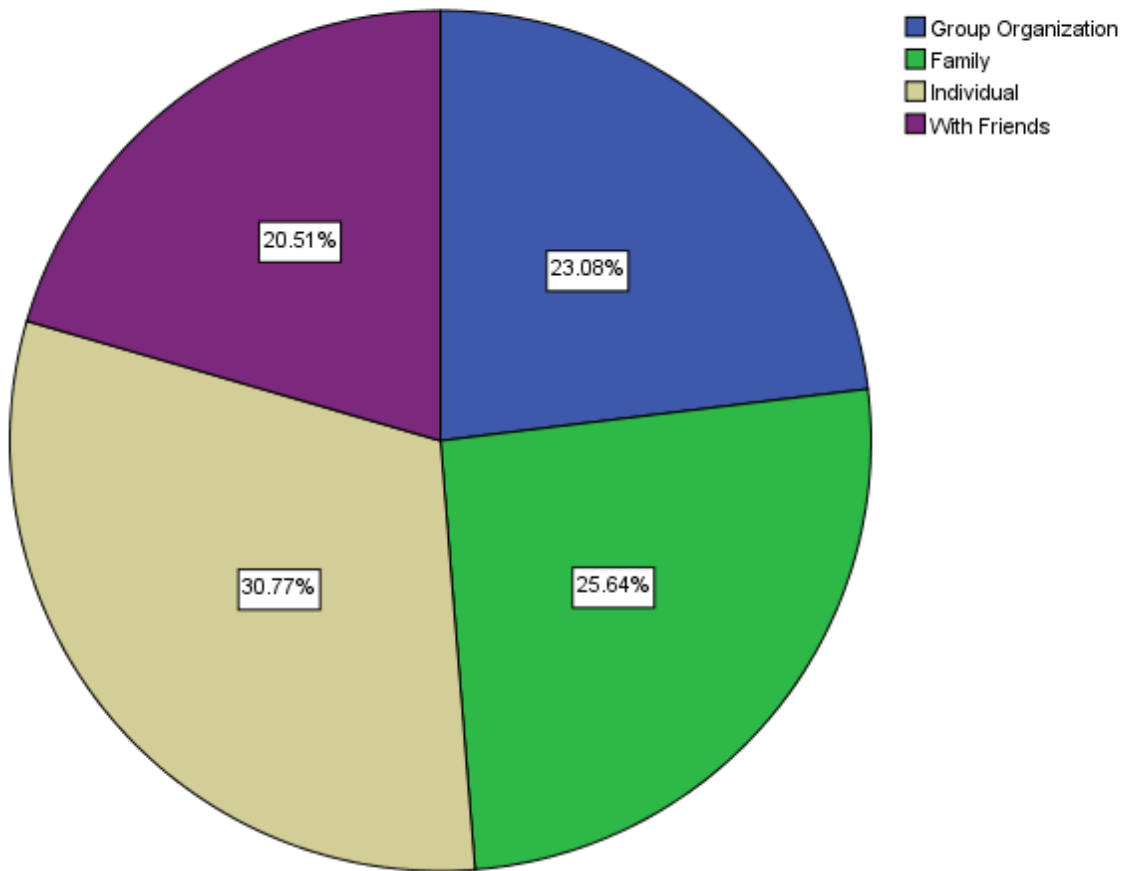
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Access to Fresh Vegetables	35	21.6	21.7	21.7
	Community Outreach	20	12.3	12.4	34.2
	Learn About Gardening	26	16.0	16.1	50.3
	Save Money	27	16.7	16.8	67.1
	Socializing Recreation	19	11.7	11.8	78.9
	Grow Culturally Favorite Foods	17	10.5	10.6	89.4
	Enjoy Gardening	17	10.5	10.6	100.0
	Total	161	99.4	100.0	
Missing	System	1	.6		
Total		162	100.0		

5. How would you participate in our community garden? (Check all that apply)



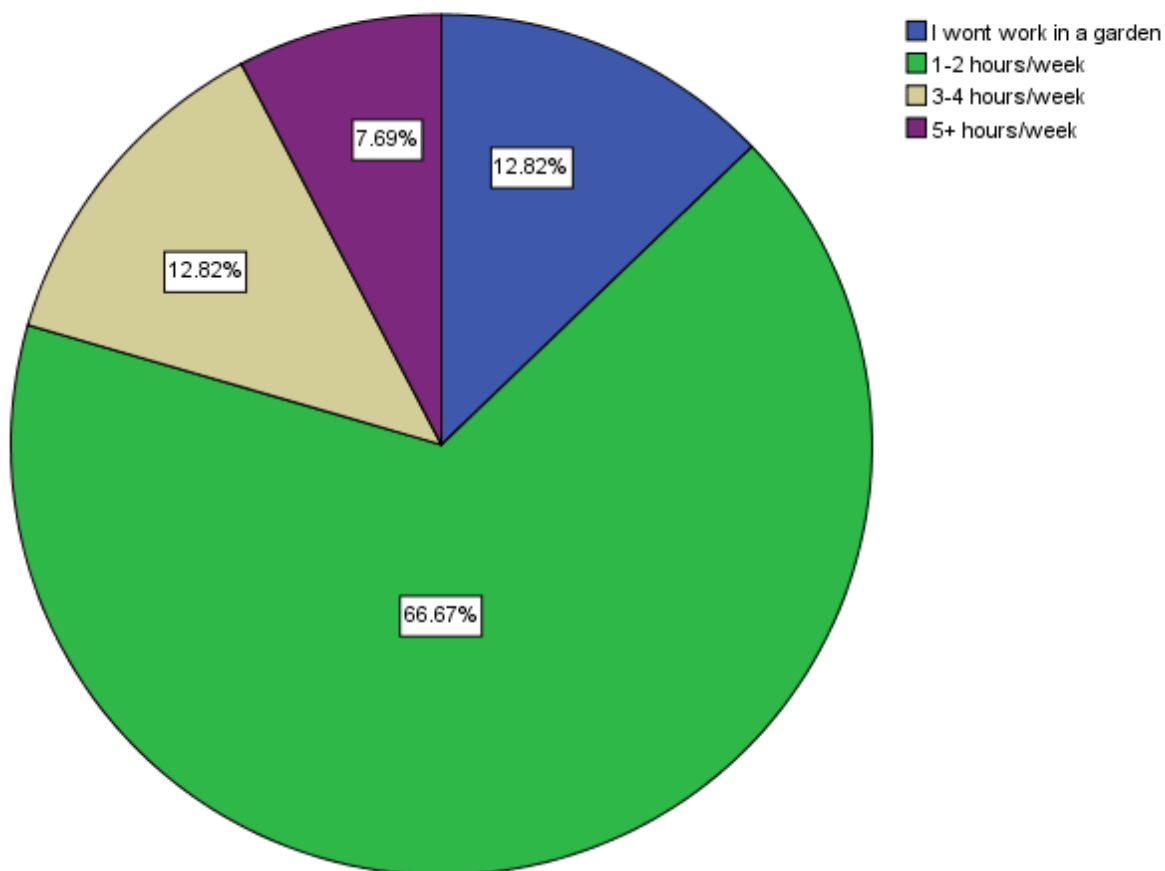
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Gardener of a specific plot	19	11.7	29.7	29.7
	Volunteer time	26	16.0	40.6	70.3
	Donate Money Supplies	10	6.2	15.6	85.9
	Not interested	9	5.6	14.1	100.0
	Total	64	39.5	100.0	
Missing	System	98	60.5		
Total		162	100.0		

6. If you were to grow organic food in a designated plot would you be more likely to do it as a:



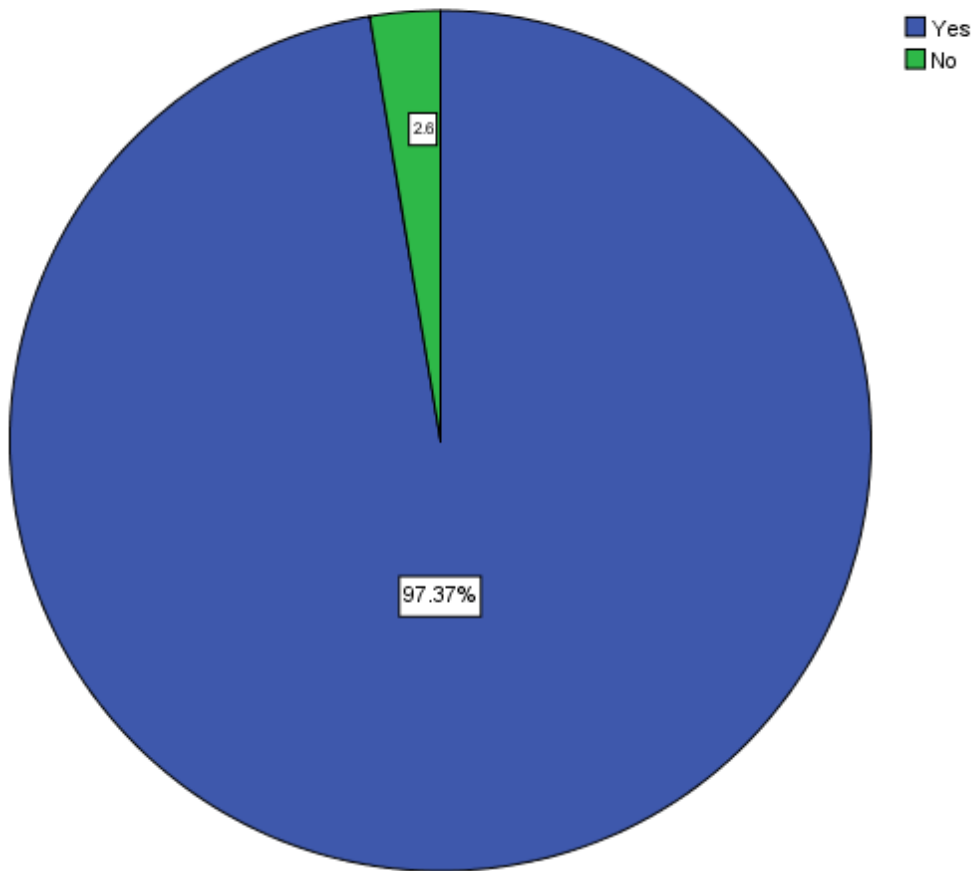
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Group Organization	9	5.6	23.1	23.1
	Family	10	6.2	25.6	48.7
	Individual	12	7.4	30.8	79.5
	With Friends	8	4.9	20.5	100.0
	Total	39	24.1	100.0	
Missing	System	123	75.9		
Total		162	100.0		

**7. How much time do you currently spend or would you be willing to spend working in a community garden?**



		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I won't work in a garden	5	3.1	12.8	12.8
	1-2 hours/week	26	16.0	66.7	79.5
	3-4 hours/week	5	3.1	12.8	92.3
	5+ hours/week	3	1.9	7.7	100.0
	Total	39	24.1	100.0	
Missing	System	123	75.9		
Total		162	100.0		

8. If you don't want to work in a garden would you be interested in buying fresh produce that was grown by students?



		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	37	22.8	97.4	97.4
	No	1	.6	2.6	100.0
	Total	38	23.5	100.0	
Missing	System	124	76.5		
Total		162	100.0		

## Appendix IV: Sample: *Wasatch Community Gardens*

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### Community Garden Information & Policies

Welcome to the \_\_\_\_ (date) gardening season! Wasatch Community Gardens is a local non-profit organization. We cultivate individual growth and neighborhood unity through community gardening and youth gardening education. Our community gardening policies and procedures are important for all community gardeners to understand. If you have any questions about this information, please call \_\_\_\_ (contact name) at \_\_\_\_ (phone #).

**Reserving your plot** Each gardener is entitled to one plot (approximately 4 by 35 feet) if space is available. If there is space remaining by \_\_\_\_ (date) gardeners will have the opportunity to rent additional plots forth remainder of the season. A \$30 garden plot rental fee is required of all gardeners. Garden plots must be cleared of weeds by \_\_\_\_ (date). If a gardener has not used his/her plot by \_\_\_\_ (date), the plot will be given to another gardener or to the Wasatch Community Gardens' Youth Gardening Program. The \$30 fee will not be returned.

**Land** With the exception of the Tomato Garden, we do not own the land used for gardens. We have lease agreements with the owners but there is always a possibility that we will lose the use of the land. For this reason, there are some planting restrictions (i.e. trees and some perennials).

**No herbicides, pesticides or chemical fertilizers allowed** Our goal is to create and nurture healthy soil and a healthy plant environment in the garden. Because plant and soil health deteriorates with the use of chemicals, they are not allowed in any of our community gardens. Gardeners using chemical weed killers, fertilizers and/or pesticides will lose their gardening privileges!

**Weeds and trash** The city requires that we keep all weeds below six inches in height. It is the gardeners' responsibility to control the weeds and trash in their own plots and adjacent pathways, and to clear their plot of trellis materials and debris at the end of the season. Gardeners are also required to assist with weeding common areas.

**Water use, drip irrigation and mulch** Automatic drip irrigation systems operate at each site. WCG will maintain this system. Please do not alter the system in any way. Please report any problems or leaks to WCG. The drip system is a water-efficient method of garden irrigation. Each gardener will learn how the drip irrigation system works at the gardener orientation meetings. You can also help make sure that water is not wasted, and greatly reduce your garden's water needs by using mulch (this also helps keep out weeds).



## No Rebar

For safety reasons, rebar is not allowed for staking or trellising.

**Cooperation and community** This project will be more successful if all of our gardeners work together. We ask that in addition to your \$30 annual fee, you also make a contribution of your time by participating in clean-up projects in the spring and fall and general maintenance throughout the season. Each gardener is expected to contribute 12 hours of labor to the garden during the year.

**Please remember** Wasatch Community Gardens is a small non-profit organization supported by donated funds that must be raised annually. Staff size is small and varies according to funding. The purpose of our community gardening program is to provide access to land, water and general garden administration. The care and maintenance of the garden is the collective responsibility of the community gardeners.

**Garden Addresses** Grateful Tomato Garden: 800 South 600 East Fairpark Garden: 300 North 1037 West Marmalade Garden: 222 West 600 North 4th East Garden: 555 South 400 East

## Sample: Community Garden Rules and Gardener's Responsibilities

Each gardener must understand and agree to the following rules and responsibilities before gardening with Wasatch Community Gardens:

Chemical weed killers, fertilizers and pesticides are not allowed in any garden.

Garden fees are \$30.00 per plot, payable when gardener registers for plot.

Plots are available on a first-come, first-served basis. Gardeners are limited to one plot (approximately 4' x 35'). Gardeners may have more plots and may be put on a waiting list for extra plots, if extra plots are available by \_\_\_\_ (date) of the gardening season.

Disrespectful or abusive language, or destructive behavior can result in the immediate loss of all gardening privileges, and forfeiture of any crops remaining in the garden.

New gardeners must attend a Garden Orientation in the Spring. Returning gardeners are strongly encouraged to attend Spring Orientations as well.

Gardeners are responsible for weeding their plots by \_\_\_\_ (date), and clearing their plots at the end of each growing season (usually by \_\_\_\_).

Gardeners are responsible for planting, cultivating and maintaining their own garden plots.

Gardeners are responsible for assisting with maintenance of common areas at each garden. Gardeners must contribute 4 hours in the spring, 4 hours in the summer, and 4 hours in the fall in the maintenance of common garden space.

Gardeners are responsible for keeping the weeds in their gardens and adjoining pathways below six inches in height.

Gardeners are responsible for clearing all plant and trellis materials out of their own garden by the end of each gardening season. Dead material should be placed in compost piles.

### ***Wasatch Community Gardens' Responsibilities***

Wasatch Community Gardens is responsible for administering the Community Gardening Program.

Wasatch Community Gardens is responsible for registering gardeners and assigning available plots to each gardener.

Wasatch Community Gardens will provide tools, technical assistance and skills training when possible.

Wasatch Community Gardens is responsible for maintenance of water and drip irrigation systems and overall administration of each garden site.

Wasatch Community Gardens reserves the right to make changes or exceptions to policies where and when appropriate.

# Appendix V: Sample Community Garden Contract

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## SAMPLE COMMUNITY GARDEN CONTRACT

*(Information in parentheses is to be determined by individual garden)*

### **(Watts Family) Community Garden Contract Rules, Terms, and Conditions for Participation**

#### **Introduction**

*The (organization/garden manager) is the highest governing authority at the (Watts Family) Community Garden. Breaking any rules, terms, and conditions is cause for exclusion from the garden and loss of your plot.*

You will receive one verbal warning from the garden manager.

If no response or correction has been made, you will receive written notice two weeks later.

In another two weeks, if no response or correction has been made, you will receive written final notification that you have forfeited your gardening privileges and plot.

You will be allowed to reapply for another garden plot only after one year, and only at the discretion of the garden manager.

#### **Rules, Terms, and Conditions for Participation**

*If accepted as a gardener, I will abide by the following rules, terms, and conditions:*

I use this garden at the sole discretion of (Watts Family) Community Garden. I agree to abide by its policies and practices.

The fee for the use of the garden is (\$32.00) per plot, per year (January 1 - December 31), due on or before (January 1). Fee for half a year after (beginning July 1 or later) is (\$16.00). There are no refunds.

Once I have been assigned a plot, I will cultivate and plant it within two weeks. I will garden year round. My plot cannot be left fallow or unused for any period of three weeks or longer, more than one time a year.

My plot is (20 x 20) feet. I will not expand my plot beyond this measurement or into paths or other plots. I will keep all my plants within the limits of my garden plot and will not allow any plants to grow more than six feet high. I must keep my plot free of weeds, pests and diseases.

I will keep my plot, paths, and surrounding areas clean and neat. I will completely separate my trash into three groups: 1) dead plants, leaves, and other green waste plant parts; 2) rocks, stones, and asphalt; and 3) paper, plastic, cardboard, wood, metal, etc. I will put each type of trash only in the areas designated specifically for each. Anything I bring from my home I will take back home. I will not bring household trash and leave it at the (Watts Family) Community Garden.

If I now have more than one plot, I will give up my additional plots by the end of this gardening year (December 31).

I will not plant any illegal plant. I will not smoke, drink alcoholic beverages, use illegal drugs, or gamble in the garden. I will not come to the garden while under the influence of alcohol or illegal drugs. I will not bring weapons or pets or other animals to the garden.

Guests and visitors, including children, may enter the garden only if I accompany them. They must follow all rules, terms, and conditions stated here. I will supervise my children at all times when they are in the garden. I am solely responsible for the behavior of my guests.

The garden manager will assign me general garden maintenance tasks each month, and I must complete them by the end of the month that I am assigned them.

I will water my plot according to water-wise guidelines. (If I use more than the recommended amount of water, I will pay a fee each month to cover the cost of this additional water.

I will attend the regular (bi-monthly) garden club meetings. If workshops are offered, I will attend at least one on each of the following topics: soil preparation and maintenance, watering the vegetable garden, and pest and disease control.

I will not apply any pesticides in the garden without the approval of the garden manager.

I will not make duplicate keys of any locks at the garden or give my key or lock combination to another person.

I will not take food or plants from other gardeners' plots. I will not take anything from the garden that is not rightfully mine.

I will respect other gardeners, and I will not use abusive or profane language or discriminate against others.

I will work to keep the garden a happy, secure, and enjoyable place where all participants can garden and socialize peacefully in a neighborly manner.

I forfeit my right to sue the owner of the property.

### **Commitment**

*I have read and understand the application and accept these rules, terms, and conditions stated above for the participation in the (Watts Family) Community Garden.*

*Signed:* \_\_\_\_\_ *Date:* \_\_\_\_\_

*Gardener*

*Approved:* \_\_\_\_\_ *Date:* \_\_\_\_\_

*Garden Manager*

**Common Ground Garden Program, University of California Cooperative Extension, Los Angeles County**  
4800 E. Cesar Chavez Avenue, Los Angeles CA 90022  
Phone (323) 260-3407; Fax (323) 881-0067; Email <[ydsavio@ucdavis.edu](mailto:ydsavio@ucdavis.edu)>

## Appendix VI: Helpful Tools

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### American Community Gardening Association

#### Ten Tools Every Community Gardener & Garden Needs

Courtesy of Toronto FoodShare

Gardeners may not agree on the best mulch or the perfect fertilizer, but there's one thing that every gardener agrees on; when it comes time to purchase tools, buy the best. Quality garden tools are an investment that yield dividends over time.

**1. Trowel:** A well-made trowel is your most important tool. From container gardening to large beds, a trowel will help you get your plants into the soil. Essential for everyone.

**2. Hand Fork or Claw or Cultivator:** A hand fork helps cultivate soil, chop up clumps, and work amendments into the soil. A hand fork is necessary for cultivating in closely planted beds.

**3. Hoe:** A long-handled hoe is a gardener's best friend. Keeping weeds at bay is the purpose of this useful tool. Hoe heads come in all different shapes and sizes and every gardener swears by a different one.

**4. Secateurs (aka hand pruners):** Invest in a pair of quality pruners, such as Felco, which is clearly a cut above. There are different types and sizes depending upon the type and size of the job. Secateurs are for cutting small diameters, up the thickness of your little finger ;-). Anything larger and you need *loppers*.

**5. Watering can:** A watering can creates a fine even stream of water that delivers with a gentleness that won't wash seedlings or sprouting seeds out of their soil.

**6. Fork:** You can't dig and divide perennials without a heavy-duty fork (and some dividing methods even suggest you own two!)

**7. Shovels and Spades:** There are several different types and shapes of shovels and spades, each with their own purpose. There are also different types of hand holds for either—a "D" shape, a "T" shape, or none at all. They are a requisite tool for planting large perennials, shrubs, and trees, breaking ground, moving soil, leaves, just about anything. The sharper the blade, the better.

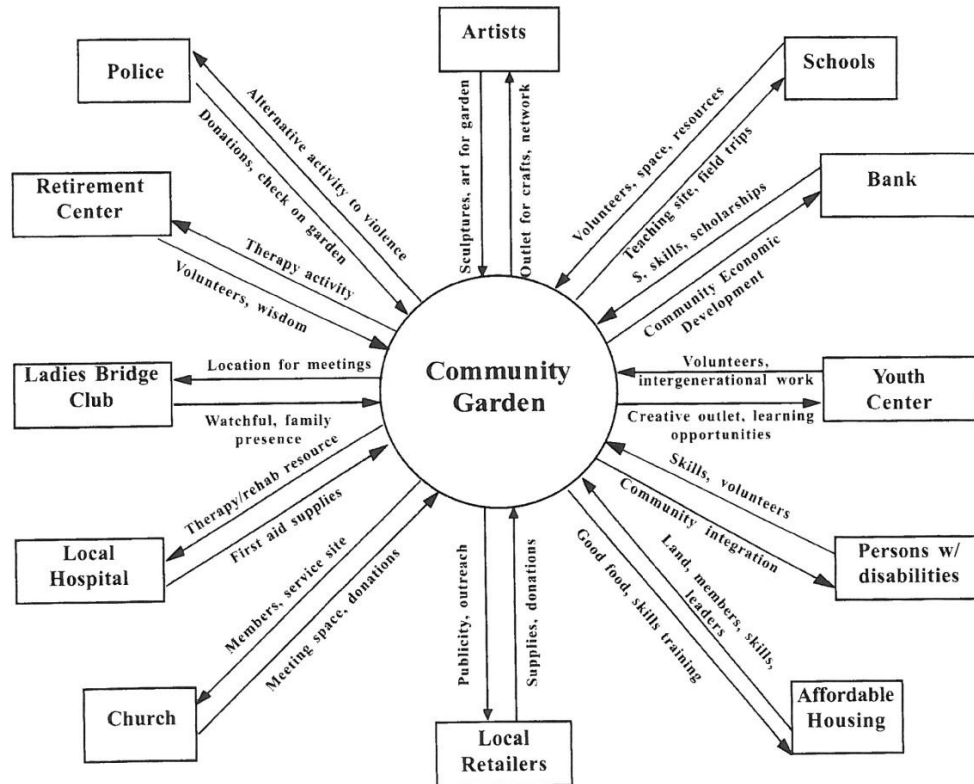
**8. Wheelbarrow:** Wheelbarrows come in all different sizes (and prices). They are indispensable for hauling soil, compost, plants, mulch, hoses, tools... everything you'll need to garden.

**9. Gloves:** Unless you want to wear your favorite hobby under your nails, use gloves. Leather gloves hold up best. If you have roses, get a pair that resist thorn pricks.

**10. Hose:** This is the fastest way to transport lots of water. Consider using drip irrigation hoses or tape.

## Appendix VII: Mapping Reciprocal Partnerships

These are helpful partnerships for any community garden to consider.



## Appendix VIII: Retail Cost Analysis

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### **Southern California Retail Pricing**

	PER POUND
Asparagus	\$2.99
Broccoli	\$1.39
Carrots	\$0.99
Cucumbers	\$0.79
Egg Plant	\$1.79
Lettuce	
Romaine	\$1.29
Ice Berg	\$0.99
Peppers	
Habanero	\$5.99
Jalapeño	\$0.89
Fresno	\$4.99
Squash	\$0.99
Strawberries	\$0.99
Tomatoes	\$3.99



Costs per planter (4'x12'x2'): \$874 (**Retail Spring 2012**)

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Redwood 2"x12"x12' \$172

Redwood 2"x4"x8' \$8

Redwood 4"x4"x8' \$30

Drip Irrigation \$30 (\$72 per 300 sq ft)

Wood Screws \$8

Soil **\$355**

Manure/Compost **\$19**

Poultry Wire \$11

Staples \$1

Labor **\$240**

Garden-wide costs:

Fencing (coverage area 667 ft. perimeter) \$3,315.87

- (garden-fencing.com three Garden Kits #1 - 300' coverage) \$1,105.29 each

Water (per semester, per plot) \$10

Tool shed (Resin tool shed, Lowes.com) \$700

# Appendix IX: Cash Flow Worksheet

	January	February	March	April	May	June	July	August	September	October	November	December	Total
<b>Non-Operational Income</b>													
Donations*	12,280												12,280.00
Grants**	8,520												8,520.00
<b>Total Non-Operational Income Needed</b>													20,800.00
<b>Operating Income</b>													
Pilot Fees***	33.33	33.33	33.33	33.33	33.33	33.33	33.33	33.33	33.33	33.33	33.33	33.33	400.00
Student Fees****													0.00
<b>Total Operating Income</b>													400.00
<b>Operating Expenditures</b>													
Water Use	33.33	33.33	33.33	33.33	33.33	33.33	33.33	33.33	33.33	33.33	33.33	33.33	400.00
Soil Replacement	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	3,600.00
Fertilizer	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	800.00
<b>Total Operating Expenses</b>													4,800.00
<b>Capital Expenditures</b>													
Lumber	4,200.00												4,200.00
Irrigation	600.00												600.00
Soil	7,100.00												7,100.00
Fertilizer	380.00												380.00
Wood Screws	160.00												160.00
Staples	20.00												20.00
Poultry Wire	220.00												220.00
Labor	4,800.00												4,800.00
Fencing	3,320.00												3,320.00
<b>Total Capital Expenditures</b>													20,800.00
Notes:													
Goal of 20 plots on 0.8 acres													
*Donations include - Lumber, soil, fertilizer, and labor, but may include more depending on participation													
**Grants to be received by Greig Guthey, Liberal Arts Dept													
***Pilot Fees will be used to cover water expense - soil replacement and fertilizer should be covered by donations													
****Student Fees will be determined by Greig Guthey and the Liberal Arts Dept													

## References

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- Associated Students Inc. Corporate Office. (n.d.). Retrieved April 30, 2012, from <http://www.csusm.edu/asi/corporate/index.html>
- Benchmarking. (n.d.). Retrieved April 15, 2012, from <http://en.wikipedia.org/wiki/Benchmarking>
- Building Materials - Screws at The Home Depot. (n.d.). Retrieved April 22, 2012, from [http://www.homedepot.com/Tools-Hardware/h\\_d1/N-5yc1vZarnk/Ntk-All/Ntt-screws/h\\_d2/Navigation?Ntx=mode+matchall&catalogId=10053&Nu=P\\_PARENT\\_ID&langId=-1&storeId=10051&primarySearchOnly=true&currentPLP=true&omni=c\\_Tools%20&%20Hardware&searchNav=true](http://www.homedepot.com/Tools-Hardware/h_d1/N-5yc1vZarnk/Ntk-All/Ntt-screws/h_d2/Navigation?Ntx=mode+matchall&catalogId=10053&Nu=P_PARENT_ID&langId=-1&storeId=10051&primarySearchOnly=true&currentPLP=true&omni=c_Tools%20&%20Hardware&searchNav=true)
- Dirt, Sand, Gravel, Topsoil, Decomposed Granite, Mulch, Delivered, landscaping, materials, online. (n.d.). Retrieved April 22, 2012, from <http://www.soildirect.com/>
- Facilities at CSUPomona. (n.d.). Retrieved April 30, 2012, from <http://www.csupomona.edu/~agri/college/facilities.shtml>
- Fresno State - Alternate Spring Break, Alluvial Garden Project. (n.d.). Retrieved April 30, 2012, from <https://www.facebook.com/fresnostateasb>
- Irrigation System Design (n.d.). In *Rain Bird*. Retrieved March 24, 2012, from <http://rainbird.com/documents/specdraw/DripControlZoneKits/PDF/XACZ-075-PRF%20Option%201.pdf>
- Irrigation System Design (n.d.). In *Rain Bird*. Retrieved March 24, 2012, from <http://rainbird.com/documents/specdraw/Dripline>
- Healthy Works SM: Victory Gardens San Diego. (n.d.). *Gardening 201: How to start and manage community gardens* (pp. 1-68). N.p.: Regional Garden Education Centers.

Poly Garden Fencing for Use as a Garden Fence. (n.d.). Retrieved April 15, 2012, from <http://www.garden-fencing.com/garden-fencing.html>

Lumber and Composites - Boards at The Home Depot. (n.d.). Retrieved April 22, 2012, from [http://www.homedepot.com/Lumber-Composites-Boards/h\\_d1/N-5yc1vZbqmc/h\\_d2/Navigation?catalogId=10053&langId=-1&storeId=10051](http://www.homedepot.com/Lumber-Composites-Boards/h_d1/N-5yc1vZbqmc/h_d2/Navigation?catalogId=10053&langId=-1&storeId=10051)

Shop Gardeners 1 Cu. Ft. Steer Manure at Lowes.com. (n.d.). Retrieved April 22, 2012, from [http://www.lowes.com/pd\\_48001-11628-3210\\_0\\_\\_?productId=3240020&Ntt=manure&pl=1&currentURL=%2Fpl\\_\\_0\\_\\_s%3FNtt%3Dmanure&facetInfo=](http://www.lowes.com/pd_48001-11628-3210_0__?productId=3240020&Ntt=manure&pl=1&currentURL=%2Fpl__0__s%3FNtt%3Dmanure&facetInfo=)

Shop Miracle-Gro 1.5 Cu. Ft. Organic Choice Garden Soil at Lowes.com. (n.d.). Retrieved April 22, 2012, from [http://www.lowes.com/pd\\_305315-446-72859650\\_4294728553\\_4294937087\\_?productId=3169803&Ns=p\\_product\\_prd\\_lis\\_ord\\_nbr|0||p\\_product\\_qty\\_sales\\_dollar|1&pl=1&currentURL=%2Fpl\\_Bagged%2BSoil\\_4294728553\\_4294937087\\_%3FNs%3Dp\\_product\\_prd\\_lis\\_ord\\_nbr%7C0%7C%7Cp\\_product\\_qty\\_sales\\_dollar%7C1&facetInfo=](http://www.lowes.com/pd_305315-446-72859650_4294728553_4294937087_?productId=3169803&Ns=p_product_prd_lis_ord_nbr|0||p_product_qty_sales_dollar|1&pl=1&currentURL=%2Fpl_Bagged%2BSoil_4294728553_4294937087_%3FNs%3Dp_product_prd_lis_ord_nbr%7C0%7C%7Cp_product_qty_sales_dollar%7C1&facetInfo=)

Sprinklers and Irrigation System Supplies. (n.d.). In *Sprinkler.com*. Retrieved April 6, 2012, from <http://www.sprinkler.com/drip-irrigation/drip-irrigation-kits>

Visitors' Center at Cal Poly Pomona. (n.d.). Retrieved April 30, 2012, from <http://www.csupomona.edu/~agriscapes/visitors.html>