

Sand Springs Community Garden



Planning for the Future of our Children
By
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The University of Oklahoma

Graduate College

Sand Springs Community Garden

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Part I

Introduction

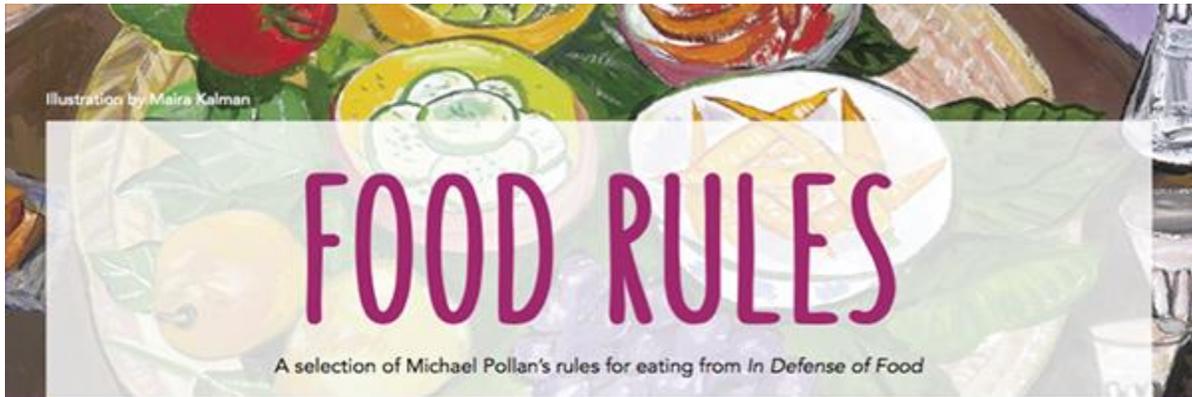


Illustration by Maira Kalman

FOOD RULES

A selection of Michael Pollan's rules for eating from *In Defense of Food*

Eat Foods. Mostly Plants. Not too much.

- Eat only foods that will eventually rot.
- Eat only foods that have been cooked by humans.
- Avoid foods you see advertised on television.
- Treat meat as a flavoring or special occasion food.
- If it came from a plant, eat it. If it was made in a plant, don't.
- Eat your colors – that is, eat as many different kinds of plants as possible.
- Use smaller plates and glasses.
- Serve the vegetables first.
- Make water your beverage of choice.
- Stop eating before you're full.
- Eat more like the French do.
- Try to spend as much time enjoying the meal as it took to prepare it.
- Don't eat anything your great-grandmother wouldn't recognize as food.
- Break the rules once in a while.

PBS In Defense of Food: Resources December 21, 2015

Introduction

Children are the future of this country. Feeding children healthy foods will be critical in the development of their future. Fast foods are causing major health issues according to a report by the Centers for Disease Control and Prevention. They found that obesity rose to 38% among all groups, up from 32% 1988-1994 through 2012 earlier (Loki 2015). Teaching school age kids how to become healthier and why they should live a life that can be sustainable should lower obesity rates. Sustainability in a healthy environment may well be the best hope for the future. Teaching kids how to achieve success by learning from the small victories in the garden will help them achieve the goals they have set for themselves. Gardening can be a small victory in growing a plant but feeding their family will become a huge success.

“You’re never too young to garden.”(Littlefield 2015) Starting children in the garden as early as pre-school helps them experience joy in growing things and brings about a better understanding of how nature works. By sampling fresh fruits and vegetables they grow themselves, it will improve the choice’s they make in the future of good eating habits. Hands on experiences give the kids a learning environment outside the class room.

While growing a garden as a school project can be rewarding, as one ages the rewards become more satisfying. With age, comes knowledge of how and when to plant to maximize your harvest. You should also choose the type of garden that best utilizes the space you have to work with.

It seems a simple change but it appears difficult in practice. Starting the day with a balanced breakfast is the simplest way get kids day going in the right direction. Fresh fruits and vegetables are essential to your diet if you are on your way to a change in lifestyle. Studies have proven that children are more alert in school when they are fed a balanced meal for breakfast. An active life style along with a good diet changes lives. Teaching the general public how to shop and prepare healthy meals will change the lives of our children.

Goals

The goals of this project are:

1. Share the basic steps required to put a community garden where you live.
2. Research indicates that students do better with school work when eating better.
3. Explain the differences in gardens.
4. Explain the benefits from growing fresh vegetables.
5. Explain my experience of trying to get a community garden started.



The Community Teaching Garden in Vermont teaches hands on gardening for beginners.

Putting in a Community Garden Where You Live

Starting a community garden in any city around the country will have the same basic strategies. Keeping in mind different growing zones due to climates, have a definite impact. Types of gardens vary based on the needs and goals of the participants. Available land contributes to the number of gardeners, size of each plot, and amount of work needed to start planting. Being creative with land you have available might be the difference in success or failure. Putting a garden in an abandoned lot can create a nice place to gather and build community pride. Providing a home for birds, butterflies and frogs, can also lead to increased environmental awareness. The size of your budget will determine, where you can start, how many beds, the type of beds or if you should just till the ground and get started.



Gardening is key to mental health (Credit World Health Organization)

What is a Community Garden?

A community garden means different things to different people. For some, it's a place to grow fresh food and herbs for cooking, or it's a place to grow flowers in all shapes and sizes. For others it may be an opportunity to reconnect with their past and enjoy nature. Gardening can mean a chance for some exercise outside with friends and neighbors. Apartment communities may not have room for a garden or maybe your yard is too small for kids, pets and a garden. A community garden can build or rejuvenate a sense of belonging among neighbors. Regardless of why people choose to participate in a community garden or how it's structured, the activity of growing something from a seed or seedling can be very challenging and rewarding. The different types of community gardens reflect the needs and desires of the community. A group of seniors, students, or special needs groups can grow flowers to beautify an area or neighborhood and the same group provide fresh vegetables to a food pantry. Community gardens are simply gardens created and taken care of by groups who share the same sense of community bonding. Communal Gardens share the work and the rewards with each member.

Characteristics of a Community Garden

The traditional community garden is where plots are separated and maintained by individuals or families. The land is often borrowed, rented or could be owned by the gardeners. Generally in these gardens, the gardeners prepare to plant, maintain and harvest their own plots. The families and friends of these gardeners consume the harvest or give some of it away, but rarely sell it. Community spirit in this type of garden allows tools to be used by everyone, seeds are shared, and watering is done by and for all gardeners.

Management of these gardens is most often by the gardeners themselves. Because community gardens come with several responsibilities such as allocating plots, mowing around fence, and resolving conflicts that arise, it will run smoother if a small group of two or three members who been voted on by the membership make these decisions and keep the gardeners motivated to maintain the site. Everyone involved will have to work together and follow the rules to maintain harmony.

Other types of community gardens are youth or school gardens. These gardens expose young people to nature and the outdoors, giving them the opportunities to do something on their own building confidence to try other things. As an educational experience learning becomes hands on. The class room learning is associated with formal training that leads to the hands-on learning. Gardens will usually be on the grounds of the school operating it, sometimes in a neighborhood but still close to the school.

Therapy gardens provide peaceful horticulture therapy for patients in many settings. Gardens are generally cultivated and maintained by trained horticulturalists planning and leading the programs. Typically these gardens are available at institutional facilities. Food pantry gardens are established at a food pantry or food bank. Produce is grown by pantry clients and volunteers; harvest is then donated to the pantry.

Benefits of a Community Garden

- **Food Production-** A community garden allows people to grow high quality vegetables and fruits for their own table and share with family and friends.
- **Nutrition-** With the availability of fresh foods gardeners eat more fruits and vegetables.
- **Exercise-** Gardening requires physical activity which will help with overall physical health of gardeners.
- **Mental Health-** Working outside with plants and nature helps reduce stress and increases mental wellness. According World Health Organization: Best Benefits of Gardening? Mental health Improvement (Evans 2015)
- **Community-** Gardening with your neighbors fosters a sense of identity and stewardship. Gardening provides a place for people with diverse backgrounds to be able to interact and share cultural differences.
- **Environment-** Gardens reduce the effect of city heat island effect, reduce run off during rains, and recycling of local organic material reduces land fill waste.(Wong 2008)
- **Teaching-** People of all ages can acquire new skills and pass down knowledge learned from past gardening.
- **Income-** Excess fruits and vegetables grown can be sold and the amount consumed by your family will reduce your grocery bill.
- **Property Values-** Community gardens attract families that prefer a healthier lifestyle in turn increasing property values with the limited number of homes in the area.(Been 2006)

Benefits of Eating Fruits and Vegetables

Having a diet loaded with fruits and vegetables could greatly reduce your risk of some common diseases, like heart disease and stroke. They can lower blood pressure, help with eye health and restore good digestive health. To maximize the benefits you need to eat your colors. The color of the fruit or vegetable helps to determine what nutrients and vitamins each has. By eating, based on color, you can give your immune system a boost in fighting off disease. Eating a rainbow of colors will give you a variety of vitamins and minerals.

Color of outside:

“Blue, purple& deep red vegetables are full of anthocyanins and proanthocyanins antioxidants associated with keeping the heart healthy and the brain functioning optimally”.

“Green vegetables, such as broccoli and kale, provide compounds called indoles and isothiocyanates, which may help prevent cancer by amping up the production of enzymes that clear toxins from the body”.

“Yellow and leafy greens vegetables are good sources of lutein and zeaxanthin, phytochemicals that accumulate in the eyes and help prevent age-related macular degeneration, a leading cause of blindness in older people. Leafy greens are also rich in beta carotene”.

“Orange vegetables contain alpha and beta carotene make foods like carrots and sweet potatoes so brilliantly orange. The body converts these compounds into the active form of vitamin A, which helps keep your eyes, bones and immune system healthy”.

“Red foods, such as tomatoes and watermelon, contain lycopene, a phytochemical that may help protect against prostate and breast cancers”.(Price 2009)

So how much should we eat per day? According to dietary guidelines from the USDA everyone should have two and a half cups of fruits and vegetables per day (USDA 2015). According to Dr. Lisa Young the average consumption is closer to half that amount (Young). We need eat more fresh fruits and vegetables to help with future health outcomes. Growing a garden in your own backyard could start you on your way to better health.

“Eating fruits and vegetables may reduce your risk of cardiovascular diseases, stroke, type II diabetes and even some forms of cancer. The Nurses' Health Study and Health Professionals Follow-up Study examined nearly 110,000 people over the course of 14 years. Part of the study revealed that the more fruits and vegetables people ate daily, the less chance they would develop cardiovascular diseases” (Bazzano 2002).

How then do we get children and adults to eat more fruits and Vegetables? "It was a simple, clear finding," said Debra Haire-Joshu, Ph.D., director of Saint Louis University's Obesity Prevention Center and a study author. "Whether a food is homegrown makes a difference. Garden produce creates what we call a 'positive food environment (Haire-Joshu 2007).

The findings of Debra Haire-Joshu show that school age children will eat more fruits and vegetables if they help in growing it. So to get your kids to eat more vegetables grow them in your back yard, or school garden or community garden. It stands to reason that eating more fruits and vegetables is of great importance to your children's health outcomes. Filling half your plate at each meal with fruits and vegetables can extend their life and give them better health.

Common Types of Community Gardens

Community Garden

Community gardens are the most popular. Incorporating family and healthy foods in the outdoors is beneficial to everyone. Working outside can provide a good way to get some exercise. It brings neighbors together to learn from each other. Gardens build stewardship and a sense of ownership in the community. It will also build leaders and bring neighborhoods together by fostering friendships.

Neighborhood security steps up by putting more eyes on the street. Having a stake in the development of a community gives a sense pride. Watching out for each other will build bonds that can last a lifetime.



Crosbie Heights Community Farm is a Community Garden That was started with help from Tulsa Community Gardens.

School Garden

Gardens for youth are often called school gardens. These gardens expose young people to nature and outdoors. Giving them the opportunities to do something on their own that builds confidence to try other things. As an educational experience learning becomes hands on. The class room learning is associated with formal training that leads into the hands-on learning. Gardens will usually be on the grounds of the school operating it, sometimes in a neighborhood but still close to the school. Rules are establish, just like a class room, not only teaching about sustainable foods but also responsibility. Kids should do most of the work and learn getting dirty can be rewarding.



Little Green Fingers: getting Children hooked on gardening

Therapy Garden

Therapy gardens provide peaceful horticulture therapy to patients in many settings. Gardens are generally cultivated and maintained by trained horticulturalists planning and leading the programs. Typical these gardens are available at institutional facilities. Horticultural therapy is using gardening as a mode of therapy. Whether it is watering, harvesting, planting or arranging a bouquet it can have a wonderfully therapeutic effect. “Many children with autism are calmer and not as anxiety-ridden in the garden space” (Pounders 2014) “Children come into the garden and explore the space on their own terms; the green nature envelops them like a blanket and keeps them comfortable.” (Pounders 2014)



A therapeutic garden is a plant-dominated environment purposefully designed to facilitate interaction with the healing elements of nature. Interactions can be passive or active depending on the garden design and users' needs. There are many sub-types of therapeutic gardens including healing gardens, enabling gardens, rehabilitation gardens, and restorative gardens. - <http://www.botanic.org/about-us-mission-statistics/horticultural-therapy/>

Food Pantry Garden

Food banks and pantries today can be a lot more than a place to pass out donated – and often leftover, unwanted – food to the hungry. “We see good food as a tool for not only ending hunger but equipping people with the skills to feed them-selves and it can be a tool for building healthier, stronger communities. So we’re all about food,” (Finston 2014), Gould Farm, Residential Therapeutic Community. Food pantry gardens are general maintained by a group of volunteers. The garden is usually located close to the pantry so it can also be used as a teaching garden for its clients. Churches and Other religious organizations are leading the way with fresh vegetables in their food pantry. They can feed the body and then the soul.



Volunteers work at a community garden that donates harvest to food bank based in local church.

<http://www.motherearthliving.com/sustainable-food/grassroots-gardeners.aspx>

Why Start A Community Garden?

Many families that are living in the city would love to grow some of their own vegetables, herbs, fruit and some flowers. Saving money on the food bill will make a difference at the end of a month. Fresh food is much better for the children, with added flavor of home grown produce. Gardening is a good reason to get the family outside and working together. Gardening can be relaxing for many and it gives you a chance to grow foods not available in your local market.

Food in the United States travels an average of 1300 miles from the farm to your plate. Transportation costs equal 10 calories of fuel energy to produce one calorie of supermarket food. Fruit and vegetables sold in most supermarkets spend as many as 7 to 14 days in transit. Almost 50 % of all perishables are lost during shipping. That amount of loss could feed a community and burning that fuel is causing other issues to the environment. Growing your own can cut down on this waste. (Coburn 2015)

Beautifying a neighborhood with a garden can bring harmony to a restless neighborhood. It's been proven that gardens that are being cared for by the entire neighborhood lowers crime by targeting vacant and blighted lots for gardens and development thus reducing areas for "no good" to happen. A recently publish study by the University of Pennsylvania's Perelman School of Medicine found that greening the vacant lots made nearby residents feel significantly safer (South 2015).

Millennia's prefer cheaper food, and want it to be convenient. But they are also more willing to pay for fresh and healthy food, and are willing to go to great lengths to find it. And they are also more aligned with the "food movement" and love things like organic farms, small batch jams and artisanal cheese. This shift – by millions of people – could change the market place forever don't forget – they will be teaching their children to eat this way too (Hoffman 2012). Every town needs this group of workers; they are the next generation to lead our cities.

Best Practices for Starting A Community Garden



After World War II the federal government was trying to persuade
Citizens to grow a garden to cut food cost.

Research

Case studies have proven that healthy eating habits will increase learning in students. “Research shows students learn better when they’re well nourished. Healthy eating has been linked to higher grades, better memory, more alertness, faster information processing and improved health leading to better school attendance (Sheehan 2015).

A study from the University of Michigan has published “A healthy diet is a big part of any successful self-care plan. Nutrition has been linked with emotional, physical, and cognitive health. Eating a healthy diet gives your brain and your body the vitamins and minerals needed to stay well.” (Gnagey 2015) .

The Campus Mind Works is a newsletter published by the faculty and designed to help students diagnosed with mental health issues and students looking for a strategy to maintain a healthy positive attitude. Research article “Breakfast” looked into the importance of a good breakfast (Zeratsky 2014) refers to breakfast is an essential part of your day, especially when tackling exams. Breakfast provides energy and improves concentration because it breaks the overnight fasting period and provides your body with the fuel needed to concentrate. By eating breakfast it reduces your hunger in the morning and lowers the chances of you snacking on food high in fat and sugar throughout the day. Eating a breakfast high in fiber will also aid in reducing tiredness.

School lunch fruit and veggies often tossed in trash, study finds.

New federal guide lines from the USDA “Choose My Plate” have forced public schools to serve more fruits and vegetables. Research from the University of Vermont used digital photography to capture images of student’s lunch trays after they selected their food, as they were leaving the lunch line, and again when they were finished and they passed the food disposal area (Reidel 2015).

They found that while children placed more fruits and vegetables on their trays - as required by the USDA mandates put in place in 2012 - they consumed fewer of them. The amount of food wasted increased by 56 percent, the researchers found.

Munch & Move is more than just a training program. It will provide ongoing support from your Local Health District. (Burns 2016), The Director of Fit Kidz Learning Centre Vineyard, explains how “*Munch & Move* has been incorporated into the daily routines of their service. Since the implementation of the program the service has seen an increase in requests for fruit and vegetables from the children. Families have also reported that their children have become more willing to try new foods at home.”



Part II

Guide for Starting a Community Garden



Lincoln County Health Department

Flow Chart is Suggested Sequence



When you have made the decision to start a community garden this guide should help point you in the right direction. Community Gardens around the country have used these steps to get started. You can change them around if need be but do not get a head of yourself. Successful cities have help start several gardens using this guide like Denver, Chicago, Atlanta and several others. They all have one thing in common, it takes organization and willing participants. You will need a core group to start with and then expand if needed.

Guide for Starting a Community Garden

1. Getting the Neighbors Together

There is an incredible amount of work involved in putting a community garden together. Make sure there is enough enthusiasm amount the group to get it started and keep it going. Survey the neighborhood for prospective gardeners and what type of garden they would like.

2. Form a Garden Committee

Forming a garden committee is recommended by most organizations. The committee has the responsibility of organizing each step as the garden is going in. They need to be liked by the rest of the group and respected for their knowledge of gardening. Decisions will have to be made that will affect everyone. Dividing the work load between the gardeners needs to be done to give everyone a sense of ownership and an opportunity to share ideas for designing the garden.

3. Find Land for Garden

Look around the neighborhood and try to land that's available. The closer you can get to the majority of volunteers the more successful it will be. Try to find land that has a flat surface if possible. There needs to be 6 hours of sun per day. Some lots will have debris left behind after demolition of structures; all of it needs to be removed. Having an existing fence would save time and money. Try to find more than one site and give people a chance to decide what would best suit them.

4. Find Land Owner

Do not use someone's land without asking first. Have a lease drawn up to assure you have a legal right to grow there. Try to agree to terms of breaking the lease if desire from neighborhood dwindles. Try and reach terms on all parcels that you have found before deciding the best fit.

5. **Decide On Plot**

Before making a decision on a site, do a site analysis. Look for available water, very important, hours of full sun, what is currently growing. Types of plant life might give an idea of soil fertility. Have soil tested if possible, before signing a lease. Is there sufficient drainage, will rain wash out the garden or will it puddle up drowning your plants? Having a fence with a drive gate would be a nice bonus. A storage building that can be used would also be a bonus.

6. **Signing a Lease**

The decision has been made on which site and all are in agreement. Make the deal legal by signing a binding lease with the owner. Liability insurance might be required by the land owner. There may be a non-profit organization that would write you a rider policy. Maybe the local government would have an option of a rider policy. Independent insurance can be found but the cost could be prohibitive.

7. **Develop a Site plan**

The planning of your garden can be as simple or complex as you decide. There are issues that have to be considered as you plan. The location and size of the plots. Are there trees or shrubs that need to be removed or left alone and worked around. There will need to be a shed to store community tools and supplies. Is your garden organic? If so, you will need a compost bin. Common garden or individual beds for individual gardeners? Name the garden and install a sign.

8. **Establish the Guidelines**

Every community garden must have a basic set of guidelines to follow. Having a clear of set guidelines will help keep order when the garden gets busy. An application form needs to be written and filled out by each garden. The garden committee needs to develop the guidelines and the application (Bradley 2013).

- **Plot maintenance** - What will the minimum standard be for keep up with your plot? Weeding and keeping planted, what about when someone stops taking care of their plot, who will take over?
- **Garden general maintenance** - How will the daily and weekly chores be divided up? How much time will each gardener be required to volunteer doing common area work.
- **End of Season Clean** - How are the gardens be left after the growing season? Is there a date that all gardens need to be cleaned?
- **Pesticides** - will there be a regulation about using chemicals on your garden? Pesticides and fertilizers, both can be organic.
- **Pets and Children** - Will there be entertainment areas for the kids or a fenced area for pets to stay? Family activities like social gardening will have kids and dogs that need looking after.



After WWII the government was encouraging people to grow
Vegetables, eat healthier, and save money.

Top Five Mistakes in Vegetable Gardening

- 1. Planting too early:** It's late February and a warm front comes in and it turns 50 degrees. You are tired of being stuck in doors and a friendly reminder from your local nursery, "new seedling coming in now every week." Everyone now is in a race to get tomato, pepper, cucumber and summer vegetable plants. The last freeze is after Easter but the excitement is too much. Plants go in and soil temperatures are still in the upper thirties. Most summer plants need at least 55-65 degrees to give them a good start. Check soil temps and last projected freeze date for your area.
- 2. Planting when it's too wet:** Planting in soil that is too wet is just as damaging to the plants as planting in soil too cold. You are not giving your plants a very good survival rate or the seeds a good opportunity to germinate. Soil should only be worked or planted when there is only a slight bit of moisture. To test your soil take a hand full and squeeze it tight in your fist. Take a finger from your other hand and poke a hole in it, if the ball crumbles then the dirt is right for planting if it stays together it more time to dry out.
- 3. Not controlling weeds:** Weeds can be a huge problem for the novice gardener and the most seasoned. It's easier to try to keep them out than to get them later. Weeds compete for the moisture and the nutrients while also taking up space in the root zone of your bed. Preventing them with mulch, wheat straw, newspaper or some type of landscape cloth.
- 4. Improper fertilization:** Nutrients are vital to plant production in all types of vegetables. Too much or too little can both cause major damage in the garden. Too much will cause the plant to grow vegetation and very few blooms. It might increase your weed problem as well. Too little will stunt the plants growth and cause it to produce very little crop harvest. Start by test you PH and then address the nutrient level based on results.
- 5. Improper watering:** Water is the most important part of a successful garden. Just like fertilizers you can over do it or starve the plants. Most vegetables need one to two inches of water a week to thrive. Watering

cycle depends on the type of soil you have and the amount of rain fall. Overhead watering works but can lead to disease and not getting water where it is truly needed. It is best to use a soaker hose or drip irrigation, less water lost to evaporation and water goes where needed the most.

Four Techniques to Attract Pollinators

One of the most important steps you can take to help insure a healthy garden is to plant a pollinator-friendly garden.

1. **Plant nectar-and –pollen rich flowers:** Choose nectar and pollen producing plant like wildflowers and some old varieties of flower. What you are looking for is a succession of blooms from annuals, perennials and shrubs. Different plants will bloom all through the growing season so do some homework to determine times of year for blooms.
2. **Go Organic:** Most pesticides and even some organic ones are poison to bees. There's no need to go with strong pesticide to keep the insect population down in your in garden. Long term exposure to chemicals from your garden can be toxic to your family and all of the wild animals that partake in your garden. Organic methods are both safer and more effective.
3. **Provide Shelter:** Bees and butterflies need some type of shelter to protect from predators and get out of the weather. You can use a dead tree that is standing to create nooks and crannies for the butterflies and different solitary bees. There are artificial nesting boxes you can buy or make them yourself. Functionality is important to your guests, not beauty, butterflies are critical of ugly just safe.
4. **Food and Water:** Consider adding special nectar feeders to attract humming birds and butterflies. They will pollinate your flowering garden so the least you can do is give them some food and water.



<http://inhabitat.com/attracting-pollinators-plants-that-encourage-bees-butterflies-and-birds-to-visit/hummingbirds/>

Useful Tools When Starting a Community Garden

- 1. Garden Site Checklist**
- 2. Sample Budget**
- 3. Application Form**
- 4. Garden Guidelines**

Garden Site Checklist

- Sun: Sun minimum 6-8 hrs
 Shading from Trees/ Structures

- Soil: Texture (sand, clay, silt)
 Drainage (wet, moderate, dry)
 Depth of Topsoil
 Compaction-Loose, Hard Packed
 PH level (test needed)
 Nutrient Levels N-P-K (test needed)

Topography: Flat or Slope (% of land)

Water Access:

- On site/ neighbor/ church/ business
 Type and Proximity to Garden Site

Site Amenities:

- | | |
|---|---|
| <input type="checkbox"/> Shed or Tool Storage | <input type="checkbox"/> Composting Site |
| <input type="checkbox"/> Estimated # of Plots | <input type="checkbox"/> Safety and Publicity |
| <input type="checkbox"/> Parking | <input type="checkbox"/> Power |
| <input type="checkbox"/> Restrooms | <input type="checkbox"/> Vehicle Access |

Sample Budget

Expenses/ Costs

Basic Elements

Water Bill	\$200.00 first year
Water System: Hoses, Fittings, Barrels, Valves	\$100.00
Tool Storage Shed	\$1,000.00
Hand Tools	\$200.00
Lease for Land	????
Liability Insurance	????
Fence	\$1000.00
Raised Bed lumber	\$20.00 per bed
Soil and Compost to Fill beds	\$700.00

Start up cost can be reasonable, less than \$400.00 or you could spend several thousand depending on shed size, equipment needs and number of beds. If water is not available, hauling water is very costly and time consuming (need tank, truck, access to hydrant, fuel, access to garden for equipment).

Sand Springs Community Garden

Application Form

FULL NAME

STREET ADDRESS

CITY

ZIP CODE

TELEPHONENUMBERS

DAY

NIGHT

E-MAIL

EMERGENCY CONTACT

I have read the Sand Springs Community Garden Guidelines and understand that failure to meet those guidelines will result in the loss of gardening privileges. I understand that Sand Springs and its agents accept no liability or responsibility for any and all incidents with this garden.

SIGNATURE _____ **DATE** _____

Gardener Guidelines

Gardener guidelines (or rules, regulations, policies, etc.) can take many shapes and forms. The guidelines will be established by the members of this garden. Please read the guidelines and direct any questions or comments to the garden committee members.

1. All gardeners are required to complete an application form. A plot fee of \$ _____ is due by _____.
2. All gardeners are required to sign up for one of the garden jobs. Please contact the garden co-leaders for more information.
3. Garden meetings and work parties are scheduled throughout the season (see calendar on page 8). Please plan to attend to get to know your fellow gardeners and help with garden upkeep and special projects.
4. Keep your plot and the adjoining pathways tended. If your plot appears to be untended for a period of time, and you haven't assigned it to another gardener, call the garden monitor or if you need help or if you will be out of town for an extended period of time. If you plan to discontinue use of your space, please let the monitor or registrar know as contacted the garden monitor, you will be contacted and your plot may be soon as possible so that your plot can be assigned to another gardener.
5. Plant tall plants and vines in places where they will not interfere with your neighbor's plot. Planting illegal plants is prohibited.
6. At the end of the gardening season, all dead plants and non-plant materials (string, wire, wood, metal, plastic, etc.) must be removed and disposed of properly and all gardens left neat and tidy. If your garden is not cleaned-up by _____, you could lose your gardening privileges for the next season.
7. Pick up litter when you see it.
8. Please put weeds and dead plants into the compost bin provided. Do not leave them in the pathway. Any diseased plants or seedy or invasive weeds are to be bagged and put in the trash so as not to contaminate the gardens. Old woody plants are to be placed in the brush pile to be carted to the recycling center.
9. Do not apply anything to or pick anything from another person's plot without their express approval.
10. Please do not leave the water on unattended. When finished gardening for the day, please roll up the hose at the faucet area, return tools to the shed and lock the shed before leaving the garden.

11. Smoking and chewing tobacco is not allowed. Tobacco can transmit a lethal virus to tomatoes and cigarette butts are loaded with toxins.
12. Pets, drugs, alcohol, radios, boom boxes and fires are not allowed.
13. Please supervise children in the garden.
14. For your safety, only garden during daylight hours. Consider gardening in pairs or keeping a cell phone nearby if it makes you feel more comfortable.
15. Report theft, vandalism and unusual activities to the garden co-leaders and police.
16. Use common courtesy, be considerate of your gardening neighbors and **enjoy**.
17. Violation of Gardener Guidelines: If any of the guidelines are violated you will be contacted by phone or email and have one week to address the violation. After one week, if the violation has not been remedied, you will lose your gardening privileges.

Signed _____

Date _____

Methods of Gardening

Strategies that can be applied to your needs

- 1. Container Gardening**
- 2. Raised Bed Gardening**
- 3. Square Foot Gardening**
- 4. Raised Bed Gardening**

Container Gardening

Container gardens utilize compact spaces. Lack of yard space is no excuse for not gardening, since many kinds of vegetables can be readily grown in containers. In addition to providing five hours or more of full sun, attention must be given to choosing the proper container, using a good soil mix, planting and spacing requirements, fertilizing, watering, and variety selection. If you do have the ground for growing a garden, containers will help to overcome problems like poor drainage, gophers and moles, weeding and soil diseases like wilting. Container gardening allows more control over the process. Each plant that requires a different PH is now easier to control. Growing multiple varieties of the same vegetable will help to decide favorite flavors.



Growing quantity in a small area is perfect for container gardening.

<http://ibumasriah.com/awesome-container-vegetable-garden-ideas/13039/>

Raised Bed Gardening

Raised garden beds, also called garden boxes, are great for growing small plots of veggies and flowers. Working in these beds are easier on you physically by not having to bend as much. If the beds are built solid you can sit on the edge boards while you work. These sides will also help to retain your valuable soil by not let it be carried away by rain. Mulching the beds heavily will reduce the amount of weeding that needs to be done and reduce the amount of water needed. It also keeps pathway weeds from your garden soil, prevents soil compaction and provides good drainage and serve as a barrier to pests such as slugs and snails. Raised beds work well for multiple gardeners growing multiple varieties of vegetables. Crop rotation is simplified by growing one product in each bed. Gardens should be built using a path wide enough accommodate a wheel chair making the garden access for everyone.



Community garden in Arlington, Texas, very organized and clean. Walk ways heavily mulched to keep weeds down. <http://www.raw-food-health.net/RaisedBedGarden.html>

Square Foot Gardening

Square Foot Garden Planting Guide							
 Tomatoes 1	 Peppers 1	 Onions 9	 Head Lettuce 4	 Carrots 16	 Leaf Lettuce 16	 Cucumbers 2	 Cabbage 1
 Hot Peppers 1	 Winter Squash 1	 Sweet Potatoes 1	 Potatoes 2	 Pumpkins 1	 Cauliflower 1	 Corn 2	 Peas 8
 Beets 9	 Eggplant 1	 Spinach 9	 Garlic 4	 Radishes 16	 Melons 1	 Celery 2	 Turnips 9
 Brussel Sprouts 1	 Kale 2	 Summer Squash 1	 Rosemary 1	 Cilantro 9	 Sage 1	 Chives 1	 Parsley 2
 Bush Beans 4	 Pole Beans 4	 Basil 2	 Bok Choy 1	 Parsnips 9	 Dill 9	 Oregano 1	 Thyme 2

Numbers represent the number of plantings per square foot

prepforshftf.com

Square foot gardening is a way of gardening that condenses your available space into one foot squares. Plants are then grown in accordance to the planting guide above. Soil used in these raised beds rich and full of biological active compost band must have good drainage. Raised beds are used Square foot gardening to protect the soil from leaching out. Square foot gardens can be less work since plants are spaced closer together and every bit of space is cultivated throughout the growing season, leaving no room for weeds. When plants are harvested that area of the garden is then replanted utilizing the space. One drawback is that plants have a different growing time spans, everything is not ready to harvest at the same time. This will cause a gardener to have to work on the garden constantly to keep up. This garden could yield more harvest than common garden if done correctly and maintained(Bartholomew 2013).

Community Garden

Community gardens are the most popular. Incorporating family and healthy foods in the outdoors is beneficial to everyone. Working outside can provide a good way to get some exercise. It brings neighbors together to learn from each other. Gardens build stewardship and a sense of ownership in the community. It will also build leaders and bring neighborhoods together by fostering friendships.

Neighborhood security steps up by putting more eyes on the street. Having a stake in the development of a community gives a sense pride. Watching out for each other will build bonds that can last a lifetime.



Crosbie Heights Community Farm is a Community Garden That was started with help from Tulsa Community Gardens.

Issues with Community Gardens

Any time you gather more than two people together there is bound to be disputes. Community gardens are no different. As wonderful and fulfilling as it may sound to be a part of a community project that helps the community, there are bound to be problems.

Common problems

1. **Stealing from others beds:** Some people will steal food out of necessity to feed their family. Others steal because it looks better than their own. It will cause lots of problems between plot owners and has destroyed the working garden.



<http://www.chicagonow.com/chicago-garden/2010/08/please-do-not-steal-the-vegetables/#image/1>

2. **Culture Clashes:** Urban neighborhoods often encompass two or more distinct ethnic or racial groups. If these groups have tensions, expect them to play out in the garden.
3. **Mischievous Activity:** Young adults with too much time on their hands can be destructive to a garden. Some may take offence to weeds in someone else's garden and help them possible ruining a harvest.

4. **Gardeners Losing Interest:** New gardeners are generally very enthusiastic about adopting a plot and growing their own food... until they see just how much time and work it takes.
5. **Soil Integrity:** The soil in community gardens is often contaminated. Because of the pollution that is in urban environments, undesirable toxins make their way into the soil at higher rates than in non-urban

Modern Farmer magazine has written an article on the problems and the seriousness of fighting in community gardens.

“This summer, a community garden in Queens, New York became a battlefield, as long-simmering tensions erupted into fistfights and death threats. When the story came out, there was an outpouring of shock and dismay: How could a haven of cooperation turn so very ugly?” (Hirsch 2013)

“People never fail to both delight, disappoint and exasperate me,” says Laura Campbell, a community gardener in Albuquerque, New Mexico. “The garden is micro community living — heck, it is Syria, Iraq, USA, Russia — just in plots and plantings.” (Hirsch 2013)

Part III

Community Garden for a Healthier Lifestyle

Starting a Community Garden in Sand Springs



Identifying the Need for Change

The city of Sand Springs has passed a resolution No.12-07 calling it Healthy Eating Active Living or HEAL. ***“Now therefore, let it be resolved that the City Council hereby recognized that obesity is serious public health threat to the health and wellbeing of adults, children and families in Sand Springs”.*** That would be the kind of resolve you need to make changes happen. Oklahoma ranks 6th in citizen obesity with 30.6 % and over 35% overweight. With numbers like that something needs to happen. Our health outcomes can be changed with enough hard work. September 11, 2011, Resolution NO. 12-07



The White House has planted a garden on the on the grounds of the White House. Mrs. Obama is taking healthy eating into Schools across the country

<https://www.whitehouse.gov/blog/2010/10/22/first-lady-s-fall-2010-kitchen-garden-harvest>

Statistical Data on Sand Springs

Data based on July 1, 2014 estimates

The population estimates on is	19,553
That's a growth of 3.8 % from 2010	
Persons under 18 years of age -	26.9 %
Persons 65 and over	13.7 %
Woman	52.2 %

Race and Origin

White alone	81.8 %
African American alone	2.4%
American Indian and Alaska Native alone	8.8 %
Hispanic or Latino	3.4%

Housing

Housing units	7,995
Owner occupied units	68.9 %
Median value of owner occupied units	\$118,800.00
Median monthly owner costs with mortgage	\$1,176.00

Education

High school graduate or higher, over 25years	87.1%
Bachelor's degree or higher, over 25 years	20.9%

Income

Median household income	\$50,920
Per capita income	\$24,035
Persons in poverty, percent	11.4 %

Sand Springs is not a wealthy community, "The poorer you are, the more likely you are to be obese or overweight" based on Federal Government surveys by the Centers for Disease Control. The need is obvious; the city is behind healthy living, now the citizens must act. (Census July 1, 2015)

Starting a Change in Eating Habits



Using a vacant lot to beauty your community and eat fresh foods
<http://www.gardeningknowhow.com/special/children/>

Based on the finding of the City Council of Sand Springs putting a community garden in a park is very desirable. Changing the health outcomes of our children is a main concern for the city. So how hard can it be, with the support of the city government, a resolution to get healthy and health outcomes that rank at the bottom of the entire country?

First step was to arrange for a community meeting to determine the amount of support that a community garden can depend on. We believe there is a need for at least 10 solid gardens before starting. The work involved is tremendous and needs to be distributed as best as possible. How to get the word out to generate interest in fresh vegetables? Depending on where you live, creating interest will be different. Social media is very popular and you can get the word to everyone at the same time. Working with garden clubs, churches volunteer organizations and any group willing to get involved.

Starting a Community Garden in Sand Springs

Steps that were going to be taken

Community gardens can be small plots of land or one large garden for growing food for the benefit community. But when things grow and you can eat the results of all your hard work can be transforming to a community. It can kick start the changes need to improve quality of life.

A community garden will require making lots of decisions. Establishing the organization of the garden is important. Deciding what you want to grow such as vegetables or fruit trees or herbs or berries will be decided from the start. Determining who the garden is for and what are the goals, to provide fresh vegetable to area or an educational garden for the schools or a place to gather and bond with your neighbor or all three and more.

Setting up a committee to set the rules and organize the group would be step one. The committee would need a set of guide lines and the authority to make things work.

- Choosing a name for the group
- Finding sponsors to offset expenses
- Work with other gardens on their best and worst decisions.
- What will the yearly dues be if anything?
- Will membership be required?
- How much garden busy work will be required by the membership
- Set the rules for the use of the garden.
- Plot sizes or 1 large site
- Will there hours the garden is open to work?
- What will be the security measures taken to keep out unwanted guests
- Will there be tools on site for everyone to use?
- Where will they be kept?
- And anything else that might come up like land disputes.

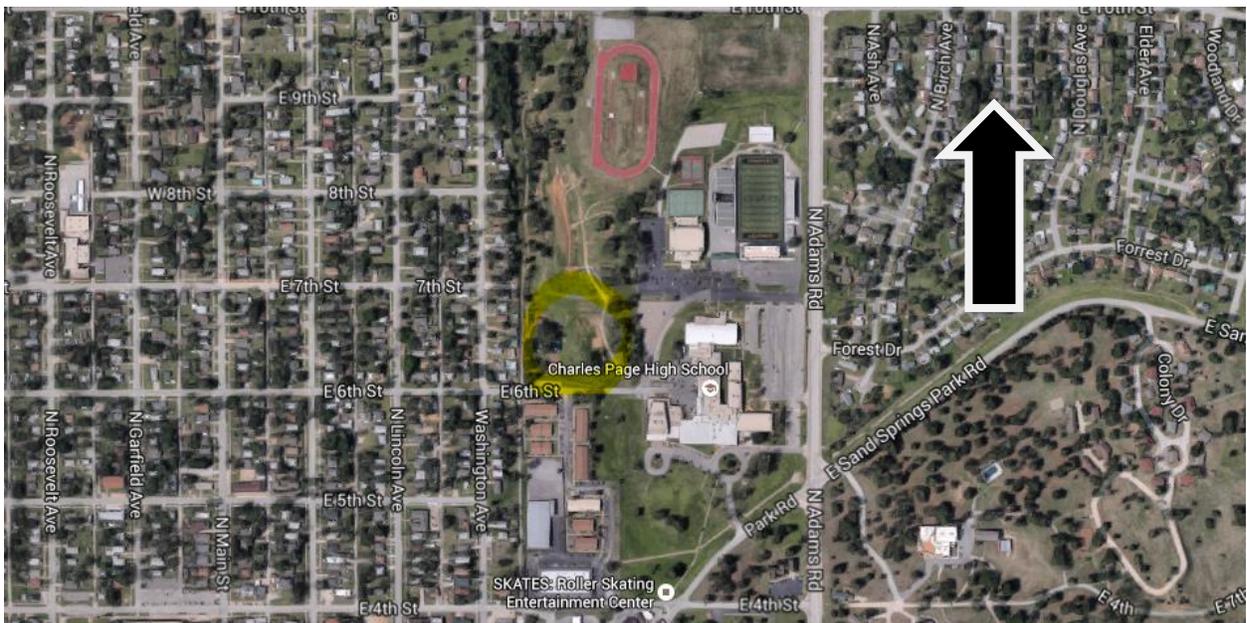
The Sand Springs Community garden committee will be made up of:

- An employee of the parks department with authority to make decisions
- An employee of the Tulsa County Health Department
- A representative for the school system

Ray Brown Park

Ray Brown Park is within walking distance to hundreds of houses. The park is easily accessible to the local high school, agricultural program, and city residents. This makes the park a perfect central location for a community garden.

The city of Sand Springs has agreed to allow a community garden to be built in Ray Brown Park. The park also serves as a flood detention area on the north side. A source of water is readily available and will be used by the garden. There is a retirement center across the street that would like to be involved. Lots of good knowledge and experience are a stone's throw away.



Google map of Sand Springs, yellow designates location of Community Garden

Arrow designates North

Ray Brown Park



Picture is facing East

Ray Brown Park is located in a convenient location, next to the Charles Page High School on the East. There is a retirement complex across the street to the South. The park has a shelter located in the center of the park with a solid surface path leading from the parking lot. There are 3 security lights in the park and street lights along the road. The parking lot has 2 handicap spaces and 10 spaces across the front. The high school agriculture teacher has agreed to help and bring in the students to learn. The green house located on the school grounds will let us start from seed our own plants. The retirement center has expressed interest in helping with the garden. The center may be a great place to donate extra vegetables for their help if they cannot physically work their own beds.

There is a water source on the west side of the park that can be tapped and brought to the garden. Tall old trees will provide shade in the hot summers in the late afternoon. The city uses the north side of the park as a flood retention basin which may lend itself to other opportunities in the future. Like a pond for raising fish for consumption, and using the nutrient rich water to use on the gardens.

Getting the Word Out

The director of the parks department has approved the Ray Brown Park to be the site of the Sand Springs Community Garden. The city also agreed to let the Case Center be the meeting place to organize, at no cost. The Case Center is a newly built community center in Sand Spring. With 3 meeting rooms and a gym it will be used by our group on a regular basis. The first meeting date was set for Jan. 12, 2016 @ 6:30 in the evening. Flyers were posted around town.

The next step was social media to get a reaction and generate interest. From the start it was gaining momentum, there were 7 people going and 38 people interested. That is a great start for a first time community garden meeting. The citizens of Sand Springs have great ideas on how to organize the garden.

I was receiving several e-mails and posts on face book inquiring about how we could get a community garden going. Several individuals have tried to gather the momentum for a garden but none have been successful. I felt with the support of the city it was going to happen.

The night of the first meeting I was hoping for a few people to get the ball rolling. Forming a committee would be first on the agenda and if you are willing to come to a meeting than you are who we need. Because of the attendance that night there was no committee made or any decision made or any warm bodies in the room except me, Daniel Schimdt (Ag teacher) and my photographer (daughter Lyndsi).

Disappointed from the showing of support we continued on to the next meeting. Set for March 4, 2016 @ 6:30, after asking for comments on days and time. There were apologies and excuses and promises to attend the next meeting. The Case Center agreed to host us once again at no cost. Again it was a bust with no one showing up. Let's try something else to get the community behind us.

Sand Springs Sustainable Gardening shared their event.
February 13 · 🌐



MAR 3 Sand Springs Garden Planning Meeting
Thu 6:30 PM - Case Community Center - Sand S...
38 people interested - 7 people going

✓ Going ▾

There is a definite need for educating the Sand Springs community. The enthusiasm is there but not as a collective group. The health of our children hangs in the balance. The importance of eating fresh- versus- fast needs to be raised all the schools. Families need to get with the movement of health and learn how to cook and buy healthier. The course to a community garden will be bumpy but I feel very strongly that we can get it started.

Starting a garden club is the next step of this journey. A container gardening group is coming soon, container gardening would be very easy and inexpensive to start and the learning curve can be made less painful. You would not need much room and most of the supplies you would have on hand.

Show us How Your Garden Grows

Join us in creating a Community Garden

January 12 @ River City Parks
Case Center

What is a community garden?
It's a plot of ground used by the community to grow fresh vegetables and herbs.

Have you ever planted a garden?
Have you ever wanted to learn?
Is fresh vegetables important?
If you said yes to any one of these questions please join us!



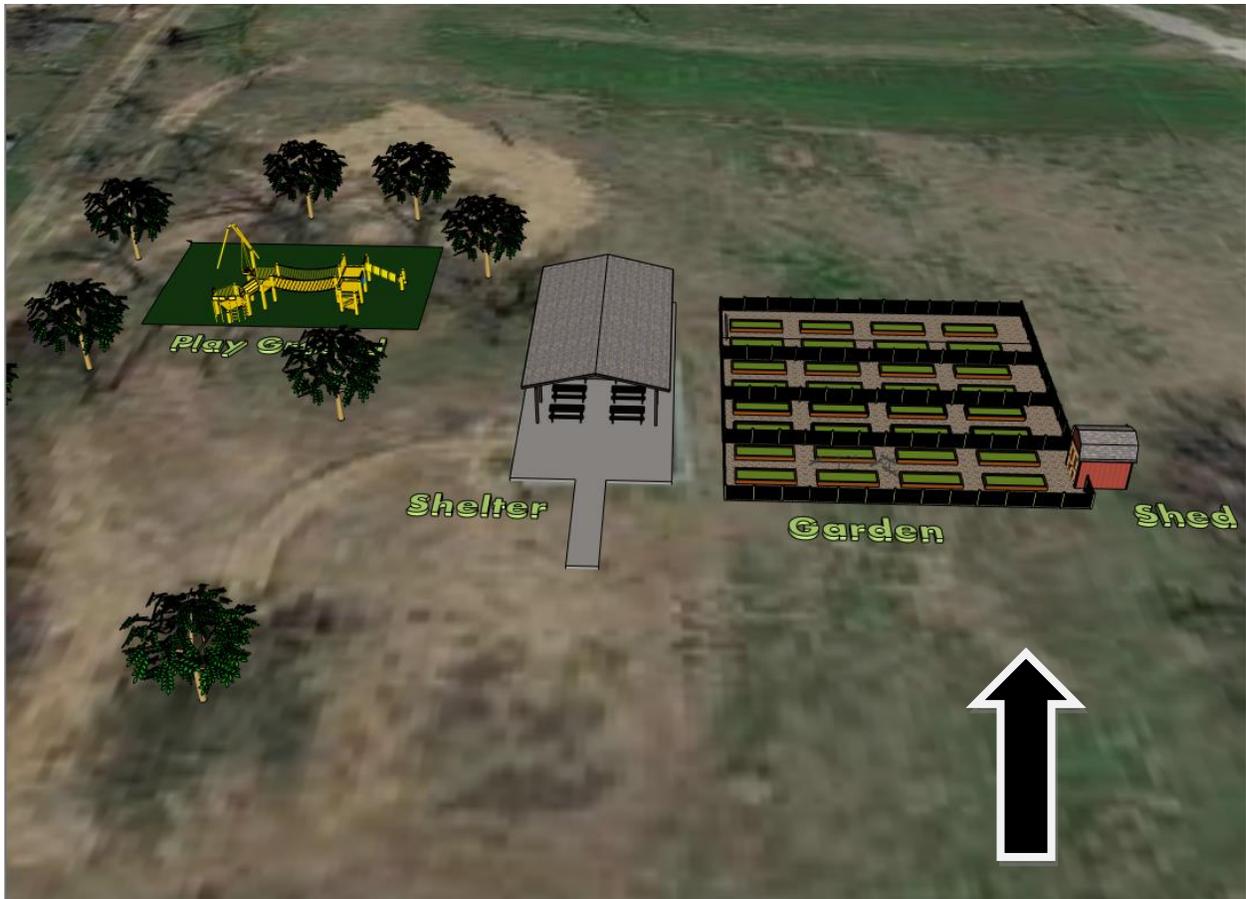
The benefits that will be gained from having a community garden.

- Opportunity for positive interaction between neighbors
- Creation of a nutrition program that will let students be involved
- Opportunity to grow and donate to harvest to a community food bank
- Establish a place to gather and socialize

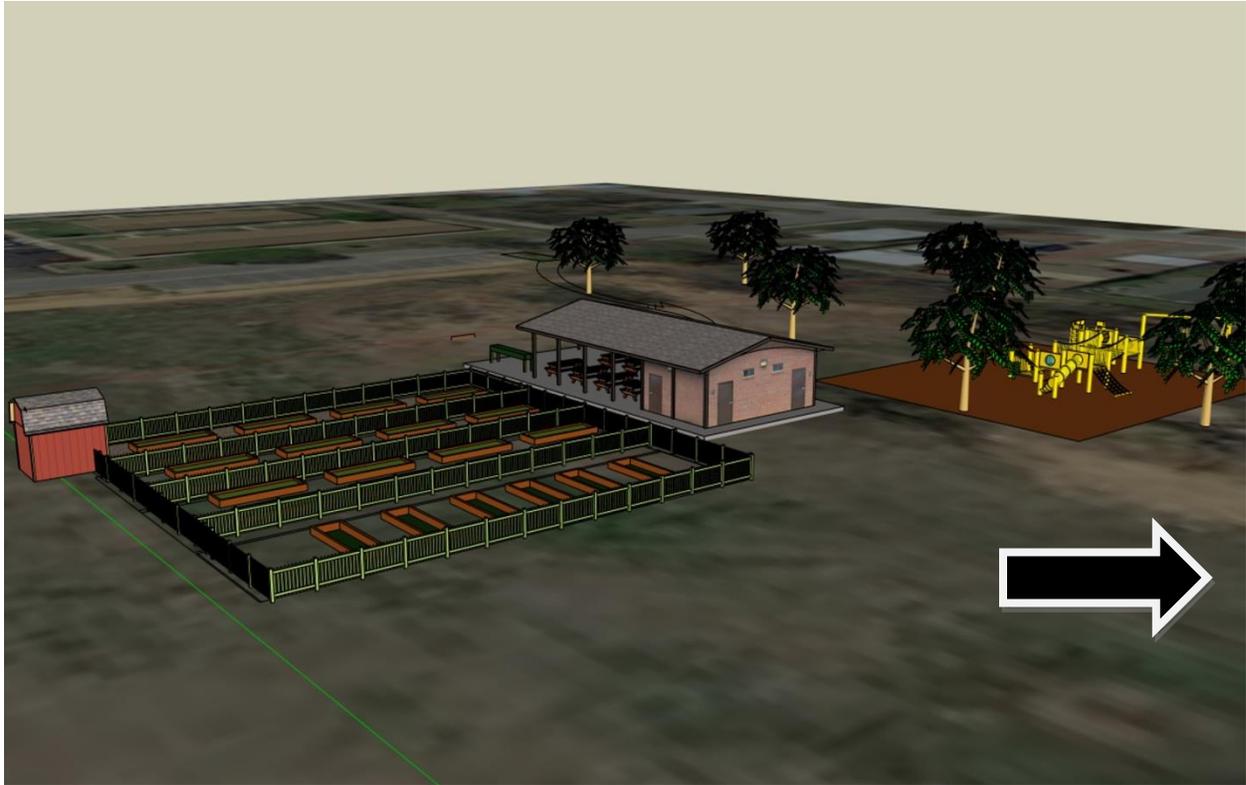
Design of the Proposed Garden



Aerial view of garden overlay in existing park. View shows the retirement center straight across the street to the south. The parking lot to the east is the high school. The surrounding area is single family homes. On the east side of the park there is a road that serves the retention pond and can be used to bring in garden materials by the gardeners. Arrow designates **North**

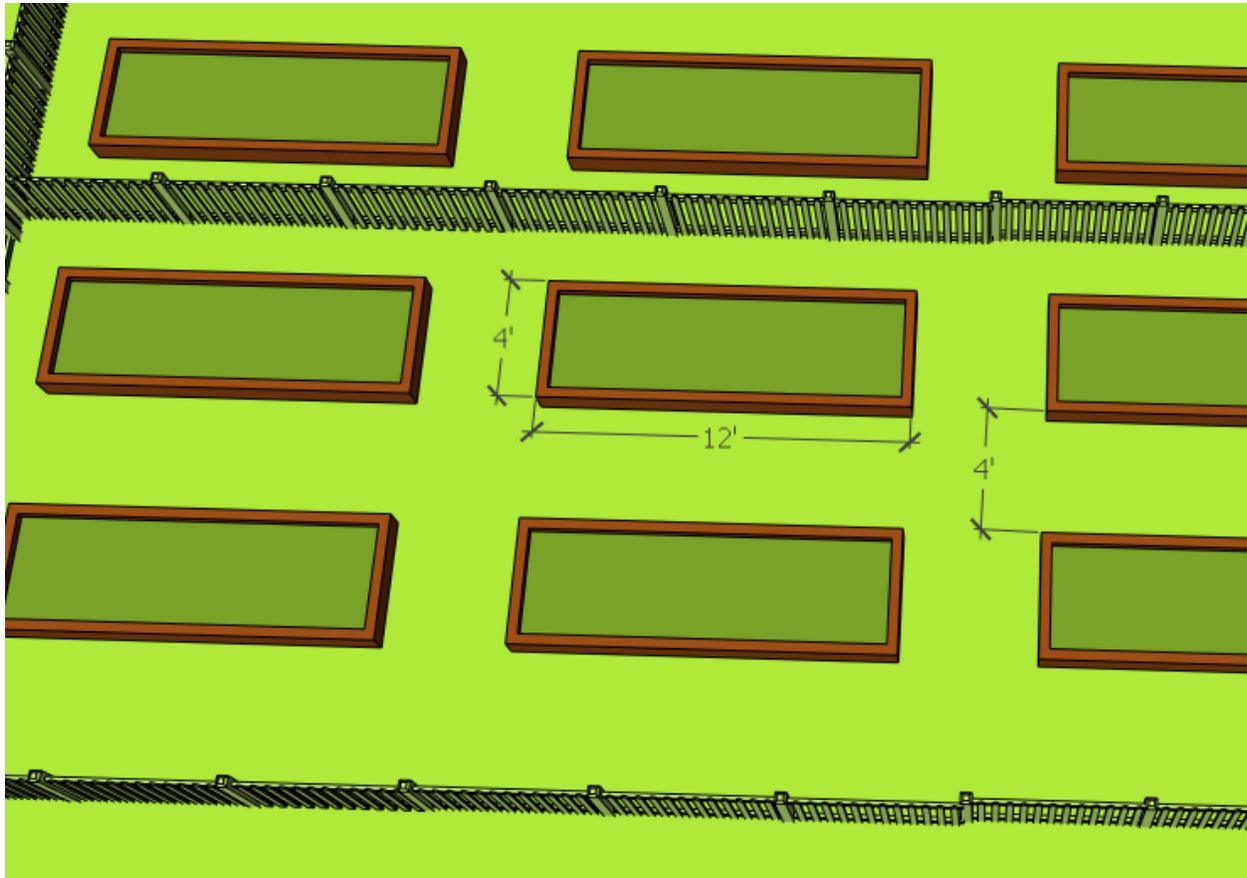


This rendering shows how the garden will be laid out with the storage shed on the east side. The pavilion is facing south with demonstration beds in the front of the pavilion but not under cover. Beds design to allow wheel chair access from all four sides. Picnic table line the underside to allow for relaxation out of the hot sun. The garden will become a gathering place for the community. There is a new playground for the kids to play on while their parents are working. The design allows for recreation all around the park with good site lines for parents to keep an eye on their kids. The existing trees will provide shade most of the day for the playground equipment. Arrow designates **North**



With this view you are looking south from the banks of the retention basin. As you can see the closest bed to this view has beds running opposite the others. These beds are intended to be for berries with the intention of giving them away. As a selected gardener you will be required to volunteer working in the berry patch. The fence around the perimeter can also be planter with a climbing berry vine. These berries could also be used for protection against trespassers if the vines have thorns. These berry plots would also be used as a teaching garden for the elementary schools in town.

The red storage shed will be used to store communal tools. Every gardener will have a key to the shed and be responsible for returning them. On the north side of the shed would be a good place for a compost pile. Everyone can contribute to the compost and turn it as needed then use when ready. Arrow designates **North**



Bed Sizes

The sizes of the beds are 48 square feet each, four feet wide by twelve feet long. The size comes from personal experience working with raised beds. At four feet you can reach the middle from both sides and four feet gives you enough room for three bush tomato plants or four bell pepper plants. You can plant rows that are twelve feet long of early vegetables like onions and carrots or leaf lettuce. Then harvest and plant a different row of tuber plants in mid spring.

The aisles need to be wide enough to bring in a wheel barrow or cart. You will need to bring in dirt, mulch, compost or other materials. After harvest there will be plants that need to be removed and room to work and avoid other gardeners. A wide aisle can also make a great place to talk while pulling weeds or picking veggies.

Conclusion

The community garden has not yet come together but I am hopeful. This project has taken me in different directions that I had not counted on. Like the amount of food wasted in transport. You would be able to feed millions of people every day if a better system was invented.

There are several non-profit groups around the country of like mind wanting to feed the children. Teaching healthy eating has gained momentum and several universities are studying the effects of poor eating habits. Mental health instructors have come to understand the benefits of a healthy diet.

The causes of obesity in the country are being studied. Conclusions to the cause have been made known with little effect on the population. The seriousness of the situation has not been understood by parents around the country. We need to take charge in teaching our school age children to eat healthier.

Knowing this information before starting this project and having scientific research to back up the claims of our un-healthiness has given me pause. There is a solution to living a healthier and longer life if can begin to take the small steps that are required. Taking the time to teach our children better eating habits is not an option. It is our responsibility as good parents to want better for our kids. The obesity rates can be lowered with understanding the solution.

Gardening will be a huge game changer if parents would try to learn a very simple way to grow fresh vegetables. One empty coffee container can produce a head of lettuce in about six weeks. An empty plastic coke bottle will grow a pepper plant. The answer is simple yet it seems to not be well received.

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