Cultivating Community

A GUIDE TO STARTING A COMMUNITY GARDEN

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Introduction

Why Start a Community Garden?

For most of human history we have been intrinsically connected to our food system. From early hunters and gatherers to the cultivation of crops and the domestication of livestock, we have traditionally controlled our own food production. It is only recently that we have become disconnected with the source of our food, relying on the industrial food system to provide our basic nutritional sustenance.

As we enter the beginning of the 21st century, many of us are questioning the human health and ecological ramifications of the industrial food system. Reliant on the mass production of food, we have lost our connection with nutritious whole foods. Processed foods, fast food and fillers have replaced a balanced diet. The age-old art of gardening is being lost as farming and conventional food production is being taken over by large business enterprises. With the alarming rise in food allergies, diabetes, obesity, and a myriad of other nutritionally related illnesses, many people are yearning for the traditional cycle of seed to harvest. There is a natural rhythm of the seasons that we humans have relied upon since we moved out of the cave and began working with nature. Others are yearning for simpler needs in the fundamental connection to the earth, our relationship with the natural world and the inter-connectedness of community and human relationships. Cultivating food provides many of these basic needs.

Community gardens address our health and dietary concerns. They provide socioeconomic benefits as well as interaction with sustainable natural ecology and stewardship of our environment. Gardeners find opportunities to take a step back to self-reliance, control over their

health, their pocket book and their environment. Growing your own food satisfies our desire to cohabit with the natural order. It fosters a sense of belonging and provides a sense of personal wellbeing. The benefits of community gardening are enormous. Besides access to a quality and quantity of fresh organic produce, growing your own food in your own community provides social benefits, urban renewal, crime reduction, intergenerational and cultural opportunities, neighbourhood building, networking, shared resources, skills development and education. Not to mention healthy recreation and exercise.

Research in economics, psychology, medicine, and sociology support the benefits of community gardening. Nature is a vital ingredient in healthy human functions. Working with nature through gardening provides individual and community perspective, pride, self-sufficiency, health and positive attitudes. Community gardens are not a passing fad; they are flourishing worldwide and increasingly becoming an integral part of our rapidly developing social landscape. We are honoured that you are considering developing your own community garden and hope that this guide helps in navigating the process of building a garden in support of your family, group, neighbourhood and city.

Creating a Community Garden

Getting Started

So, you would like to start a community garden? Excellent! Whether you are considering a community garden for your neighbourhood, school, faith-based organization, housing complex, agency, business or community center, there are some details to consider first. Generally a group of likeminded individuals spearhead the concept of a community garden. Their reasons may be varied, but the goal is similar. Your group will need to examine their intended population and identify the needs and objectives of the garden and the gardeners.

Following the inception of your group's initiative and development of the project framework it will be important to get community input. Advertise your objectives, rally the troops, and recruit interested community members. Organize a public meeting to present your project to the community with a clear plan of intent. The more people committed and engaged in the project from the onset, the smoother the planning will go. You will need to determine the community's needs. Feedback from the neighbourhood, the community and interested parties is invaluable. You might consider having a brief survey prepared. Discuss potential garden sites and the pros and cons involved. If you have a garden site in consideration, invite the neighbours. Discuss the garden's structure and operations. At this time the opportunity to get committed people involved, and form committees, may present itself.

It is critical to establish a Garden Coordinator to help organize the meetings and planning of the garden. This is often the person whose passion and energy initially conceived of the idea. Identify the group's skills, assets and strengths. Are there interested persons whose profession or personality may be a benefit to the cause? A lawyer or carpenter could be as valuable as a stay at home mom or retired farmer. Create groups or committees to focus on the development tasks at hand. Call on volunteers to chair the various committees responsible for the different components of the project. Besides a Garden Coordinator, the administrative structure should include a Treasurer and a Secretary. The responsibility of these roles needs to be clearly defined. The Committee structure at the development stage typically includes a Site Committee, a Building and Design Committee, a Fundraising and Finance Committee, and a Communications Committee.

First, a gathering of interested participants should clarify the intent, develop a vision statement and identify your objectives. Consider the who, what, where, when, and why:

- **Is there enough demographic to support a community garden? Who would benefit from a community garden?**
- **What is the purpose of creating a community garden?**
- **Is the objective access to healthy foods, nutrition, education, economic support, social benefits, and neighbourhood improvement opportunities?**
- **Do you have a potential garden site identified?**
- **Will it meet the demands of the community?**
- **When are you hoping to execute the plan, will it be long term and sustainable?**
- **Why is a community garden important for your group?**

An initial meeting should consider these points, clarify the intent, and conclude with a mission statement.

Following is an example of some of the positions and responsibilities that may need to be appointed in order to ensure the success of your community garden project. This list is a suggestion of possible needs for your garden group. Of course each garden will have different requirements and organizational needs depending on the independent circumstances. Your garden may be agency based and require a much simpler plan, or it could be a grassroots project organized through volunteer efforts of local residents, and need additional or specific attention. The following list provides suggestions that will need further development.

Administrative Functions

1. Garden Coordinator

As the administrative structure is formed, communication is key to success. The identified Garden Coordinator is best suited to facilitate communication between the committees and all working groups during the development of the framework, as well as the ongoing management of the garden.

- Set up communications networks and media releases
- Organize and chair meetings
- Facilitate communication between the committees
- Contact and network with businesses, community groups and organizations, as well as clubs and service groups
- Create agendas and organize timelines

2. Treasurer

To establish funding sources, manage the budget and maintain financial records in support of the financial operations and needs of the garden over time and during its development.

- Maintain general bookkeeping
- Research grants and funding opportunities
  - prepare applications
  - develop a budget with committees input
- Source in kind donations and support through neighbourhood organizations and businesses
- Open a bank account for community garden business
  - 2 persons should be responsible for the bank account
- General bookkeeping, data entry, membership dues
- Responsible for tracking and recording the gardens costs
- Provide a treasurers report at meetings

3. Secretary

This position should aim to organize the garden from an administrative perspective, including office administration and dissemination of information pertaining to the garden. Manage the operations of the garden in conjunction with the Garden Coordinator.

- Administrative duties
- Gardeners lease agreements and related materials
- Documenting minutes of meetings
- Applications for permits and insurance
- Legal agreements
- Letters of support
- Operational plans
- Memberships and registration procedures
- Facilitation in writing the rules and regulations, policies and procedures and all paperwork associated with the garden's development
- Print material, developing signage
- Office operations and details

Committee Functions

As the administrative structure is formed the entire group should brainstorm and decide the appropriate division of responsibilities for your particular project. It is advisable that individual development committees are formed in volunteer support of the administrative duties. Additional committees need to be delegated for the implementation of the community garden.

1. The Site Committee

This group's duties involve all the details pertaining to securing an appropriate community garden site, supporting and reporting to the administration and working cohesively with the additional committees (i.e. Building Committee).

- Identifying potential garden sites
- Research into ownership and land use
  - Title search
  - Land Registrar's records
  - Permits, zoning and bylaws
  - Initial contact with owner or City Planning
- Site survey and analysis
- Analysis report to appropriate administration
- Develop terms of use agreement
- Research legal clauses and insurance requirements
- Work with Building and Design Committee to plan the site's function
- Work with Garden Coordinator in communication with City departments or private landowner
- Work with Building Committee as per site development

2. The Building Committee

This committee is responsible for the design, layout and construction of the garden based on the acquired site and Site Committee's recommendations, the project's requirements and the proposed budget.

- Ensure that the chosen land fits the criteria for your proposed community garden
- Work with the Site Committee on the survey and analysis
  - identify issues
  - locate any utilities
  - soil testing
- Measurements, plotting and calculations
- Materials list and estimate for budget review
- Sourcing materials
- In kind donations of materials, required machinery/tools
- Volunteer recruitment in the construction of the garden

3. The Fundraising/Finance Committee

This group will focus on the initial funds required for the acquisition and construction of the community garden. The group will aid in securing grants and donations and facilitate the efforts of the Treasurer in determining the financial requirements of the garden. The garden's estimated costs, as well as the existing sponsorship and support, will determine the Finance Committee's efforts and the amount of fundraising required. Some responsibilities may include, but are not limited to:

- Grant applications and writing
- Procuring sponsorship and financial contributions
- In kind donations of building materials and supplies, or tools and garden equipment
- Fundraising events
  - Silent auction
  - Plant sales
  - Dinners, barbeques, picnics
  - Farm sale proceeds
  - Craft sales
  - Courses and workshops
- Funding programs research
- Supporting the garden's administration, especially the Treasurer in creative solutions and continued financial security

4. Communications Committee

A group of enthusiastic volunteers and gardeners, as well as the Secretary and Treasurer, will be required to assist the Garden Coordinator, especially during the development stages of the garden. Some areas that may need additional manpower are:

- Recruiting garden members
- Typing contact lists for email and telephone.
- Development and aid in maintaining a webpage or blog for the garden
- Designing newsletters and announcements
- Helping organize educational and fundraising activities and events
- Advertising and public or media releases
  - creating posters, flyers and print material about the garden
  - generating interest and support for the community garden
  - contacting newspapers and local radio to inform them about your project. Book an interview with either as part of your advertising and public awareness campaign
- Research and networking with local clubs and organizations
  - See Resource Guide for suggestions
- Contacting service clubs, youth groups, seniors centers

Operations

The administration, together with the committee chairs, will develop tools required to provide clarity and guidance for the development, implementation and ongoing operations of the garden. The guidelines, rules and regulations are agreed upon and set forth in writing. These tools form the basis for the garden's operating standards:

Policies and Procedures (see Resource Guide for Samples)

- Registration
- Seasonal operations
- Maintenance regulations
- Permitted activities
- Tools, equipment and resources
- Members liability, health and safety standards
- Watering and parking restrictions
- Integrated pest management guidelines
- Policy enforcement rules

Gardener's Contracts (see Resource Guide)

- Lease agreements
- Maintenance agreements
- Liability waiver

Administrative and Management

- Registration procedures
- Membership and applications and wait list procedures
- Communications, notices, newsletters
- Emergency contact procedures
- Site leader's duties and volunteer guidelines

A presentation should be prepared to propose your community garden project. This might include:

- The Vision Statement
- An introduction to the garden's administration and acknowledgement of any sponsors, investors, or stakeholders
- An introduction to the committees and their chairpersons
- An introduction to the site, as either a visual representation or a group site visit
- The site survey analysis and any related information
- A presentation of the concept design and master plan
- A materials list and rough estimate for review
- A report from the Treasurer, and an overview of financing for the project
- Budget and funding opportunities should be outlined
- An overview of the agreements and contracts necessary to the garden
- A presentation of the policies and procedures draft
- A maintenance proposal or commitment
- A schedule and timeline for the garden should be outlined
- A name for your garden should be agreed upon and officially adopted at this time

Governance or Partnerships

- Legal contracts, leases, or agreements required
- Service agreements, agency or business support etc.

You have now established the foundation of your community garden group. An administrative framework, volunteer committees and policies and procedures have been developed. The ball is rolling, enthusiasm is strong and you have a clear plan as to the steps necessary to make your community garden a reality.

Remember, communication with one another and the group as a whole is critical. The various committees will need to meet regularly to plan their criteria and execute the tasks outlined in the initial gatherings. Timing and the scheduled procedure are important as well. Some tasks will happen simultaneously and others will have a definite order of process. Once your committees have had adequate time to plan, research and compile the required information, a group meeting should be organized so that the committees can report on their progress and the group can make important decisions together. Everyone involved should have the opportunity to consider all of the information and findings by the various committees. The group will then have a chance to discuss their findings and make informed decisions concerning the development of the community garden project as well as the actions to take.

Once you have reviewed the information as a group, secured a site for the garden, established the legal requirements and negotiated a terms of agreement or a lease agreement, as well as established the operations and management of the garden, it will be time to develop the project further with a design, materials list, and building cost estimate. When the fundamentals are set, consider holding another public meeting or a stakeholder's forum to formally introduce the community gardens project. It may also be necessary at this time to go before City Council or a Residence Neighbourhood Association.

The Garden Site

You may already have an appropriate community garden site identified, as is often the case when embarking on such a project. However, when scouting land for your community garden there are certain requirements to consider. Is the land privately owned or public land? It could be an underutilized municipal space, a schoolyard, community center, a hospital complex, a business, or a private residential lot. Regardless, you will need to identify who is responsible for the land.

Before you approach the owner, or persons responsible for the land, you will need to determine if the site is appropriate for your community garden. Your group should examine the site to ensure that it meets the needs of your community garden project. Following is a checklist of considerations:

1. Sun and Exposure

A vegetable production garden needs a minimum of six to eight hours of direct sun per day for maximum yield. There could be some shadier areas for seating, common space and utilitarian usage. You should also consider the wind patterns; often surrounding structures can cause a wind tunnel. Wind is very damaging to plants and can rob vital moisture from the soil.

2. Soil Quality

It is important to know of the history of the site. Was it used for commercial or heavy industry, was it residential or is it virgin land? You will need to determine whether you may have toxic contamination or heavy metal content to contend with. Is it rocky or sandy? In addition to sun, soil is the most important factor to the success of your garden.

Once you have confirmed your site, it is recommended that you have the soil tested. A soil test kit can be purchased at your local garden center. These soil tests generally cover only the nutrient content, the ratio of nitrogen to phosphorous to potassium (NPK) and the soil's PH. Some soil tests will also report the organic content and trace minerals of the soil. However, if you suspect any toxic contamination you will need to have the soil tested at a lab. Contamination testing can be quite expensive so it will be beneficial to know the past use of the site and have an idea of your suspect contaminants.

In addition to the nutrient content and the contaminant issues, it is important to understand the soil's composition. Clay soils hold water, drain slowly and affect oxygen and fertility. Sandy soils do not retain water, drain too quickly and wash the nutrients away from the plants root system. The addition of organic matter, especially in the form of humus rich compost, will improve any type of soil. If the land is too rocky, sloped or toxic contamination is a concern, you may want to consider the use of raised garden beds. There is more information on raised garden beds in the sections on designing and building the garden.

3. Drainage

Poor drainage patterns can be a challenge. In addition to the soil's characteristics, drainage of the site as a whole is very important. If the site is unevenly graded, the low areas will hold water and become compact and muddy. Again, consider amending with organic matter or sand to improve the drainage, or consider building up the soil in raised beds. The problem could be underground—often subterranean springs, leaky pipes, buried pavement or nonporous debris could be affecting the drainage. Short of expensive excavation, the option is to adapt by improving the soil in the affected areas, adding raised beds or considering the area for another use: a compost system, wetland garden or raised storage shed.

4. Water Source

Of course, water is equally as important to any vegetable garden's success. Easy access to water is imperative. If the site does not have utilities provided, consider having it installed. You will need to determine the availability of city water at a curb stop. Employ the assistance of a plumber or irrigation specialist to investigate the cost of installing a watering system.

Whether it is faucets placed strategically around the garden to accommodate hoses, or a professional irrigation system, access to water is crucial in the success of your garden. When consulting a water specialist, inquire about the installation of enough water spigots to accommodate the number of plots you are considering. It is acceptable to have two plots share one spigot with a splitter, but more than two gardeners sharing a water source may lead to future disputes around watering schedules, water pressure, the use of timers and soaker hoses, not to mention safety issues with hoses crossing paths and becoming entangled. Consider having a common use faucet and utility sink for cleaning veggies, hands and tools. Rain barrels are helpful, yet can be costly, in supplementing irrigation if water access is limited.

5. Site Orientation

The community garden's location is also important. Is it accessible? Is it level enough and large enough to meet your member's criteria? Convenient access for the garden members as well as vehicle parking and access for delivery of materials and removal of debris and green waste are factors to consider. Is it close to transit, centrally located in the neighbourhood or off the beaten track? Is it well lit and open to public view? The proximity to public space could be a deterrent to vandalism or misuse of the garden. Safety, as well as convenience should be paramount in your search for a garden site. Is the garden able to accommodate fencing to deter foraging animals and uninvited guests? Another important consideration is access to public restrooms and telephones. In addition, a garden that is centrally located and visible to the public is more likely to become a source of community pride.

Privately owned land may require the garden to carry its own liability insurance. You will need to check with a local insurance company as to policies available to cover your group and its members.

Currently there is no specific policy that covers community gardens or urban agriculture. Some private owners may be willing to have all participants sign a "hold harmless" clause which absolves the property owner from any liabilities. Land owned by municipalities, or public lands can often include groups using the property in their own insurance.

Agencies and institutions may offer the same insurance policy inclusion. It is the community garden group's responsibility to ensure that the group and the gardeners are adequately covered by any necessary liability insurance.

Once you have found an appropriate site for your community garden, you will need to determine its availability. You will want to research the land title and check the records at the Land Registrar's Office, if it is privately owned. It is also helpful to visit your city's website and conduct an Online Property Information Search. Public ownership can be determined by checking with the municipality's building department, Development and Engineering. If the land is public, your group will need to contact the City Planning Department to see if zoning and permits allow for a community garden or if the zoning can be changed to accommodate your project. If you discover that the land is privately owned, you will need to contact the land title owner and make your request. Either way it is a good idea to have your proposal prepared. It is also helpful to have letters of support from prominent members of the community.

The description of your project should be well organized, informative and brief. The letter of intent should include: a definition of community gardening, its aims and purposes and a general use plan, including your policies and procedures. Information on any sponsoring agencies or businesses, plus contact information for the group's administration and volunteer support.

Once interest is secured and the property owners, or powers that be, have agreed to allow the land use as a community garden, you will need to work out the terms of use agreement. This will be the basis for the preparation of your lease agreement. Points to consider when developing the terms of use agreement are as follows:

- Description of general purpose
- Property description and location
- Use of utilities and services
- Costs and fees associated with land use
- Permits and insurance
- Maintenance responsibilities
- Length of lease, lease termination or modifications
- Option to renew lease
- Hold harmless clause and non-discrimination clause

A site inspection report and proposal for changes and development to the site should be clearly identified in the terms of use agreement

The Design

Once the land for your community garden is secure, the group will need to conduct a site survey and analysis, as described in the previous chapter. This survey should be conducted by the Site Committee, in collaboration with the Building Committee so that everyone is on the same page and no details are overlooked. You may want to delegate a subcommittee from both groups to work on the drafting of the design.

A plot plan may be available through the City or the landowner. This is a plan indicating the property lines and measurements of the parcel of land that you have to work with. Some plot plans will outline additional information such as underground utilities, existing structures on site, and the property's directional orientation to North.

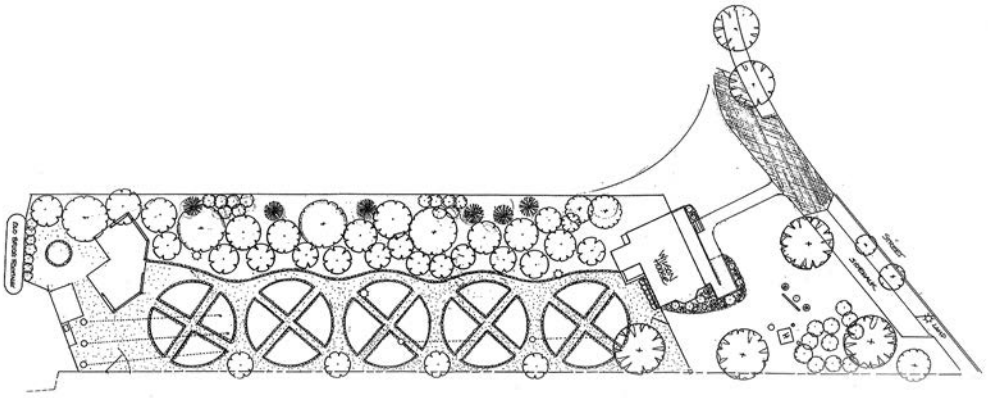
A base plan should be drawn up from the plot plan's information. Generally a good scale to work in is 1:4 inch scale (or 1:50 metric). This means that 1 inch on your drafted base plan equals 4 feet measurement on the site. You may have to work between standard and metric scales. There are free conversion tables online (see Resource Guide) that will help you with any required calculations. Once you have transferred your plot plan to your scaled base plan, it's time to plot all the gathered information from the site survey and analysis.

With base plan in hand, walk through the site and record relevant information on the base plan. Make notes on the sun and shade patterns throughout the day and record any wind directions that you may note. Don't forget to assess the four directions, as this will largely determine the garden beds' orientation. You may want to consider any natural traffic flow patterns for future pathway considerations. As well, make note of any natural features, a large boulder or rock bluff, an old stump or a stunning view, that you may want to edit or incorporate into the design.

Determine whether the soil is adequate based on the Site Committee's findings. If a soil test has not yet been conducted, now is the time to do so. Note the grade of the land, any slope and its direction. If the site is very steep or has a number of elevations you may want to consider having the land surveyed to indicate its precise topography. This means measuring the vertical height between two points. Ideally you want the land to be as level as possible, slight slopes are acceptable, but if you are dealing with any problematic grade changes, you will need to consider having the land machine graded by cut and fill, or terraced to support your garden plots. Another design consideration is working with the existing elevations and building raised beds to accommodate the changes in grade.

Regardless, the lay of the land will determine the garden's design layout. Another consideration for grade analysis is drainage. Is the slope of the land causing water to pool in certain areas? Is soil erosion and natural water flow a concern? Amending the soil with adequate amounts of organic matter, compost, manure, or sand will definitely help with drainage problems. However, if the soil is rocky or contains lots of existing vegetation, weeds or other debris, or if the existing subsoil tests negatively for food production, you will still have to consider topsoil removal, either by machine or by manual labour, as well as the addition of appropriate, organic soil. It is a matter of budget versus volunteer labour as to how you will proceed.

Once you have identified any issues and noted them on your base plan, it is time to measure fixed or existing features. With a reel measuring tape (50–100 ft) find a fixed position such as a building, utility pole or sidewalk. From your fixed point start recording measurements onto your base plan. It is helpful to record these measurements and existing elements on an overlay of tracing paper. Plot any existing shrubs or trees, noting trunk diameter, canopy spread, and condition of the tree. It may be necessary to remove or prune existing trees and shrubs, if possible, to accommodate the garden's design layout and minimize shade. Measure any fixed features such as buildings, fencing, walls, sidewalks, light or utility poles, and access points.



You will also want to locate any water sources, whether it is existing faucets on a building, an irrigation manifold, curb stop or indication of where water services may enter the property. In addition, you will want to locate any underground services, especially if you intend on doing any digging or excavation work. Underground services could be gas lines, water mains, electrical services or any other utilities. If you intend on digging it is imperative that you call B.C. One Call (*call before you dig*)—see Resource Guide.

Plot everything that is on the land on the base plan overlay, including adjacent buildings, roads, parking lots or pedestrian pathways that are outside of the properties boundaries. These surrounding elements will also affect your design layout and may even drive the design. If there are neighbouring buildings casting shadows during prime times of the day, public parking that impedes or enhances the access to the garden, even unsightly views that you wish to screen or features next door that you may want to include to enhance the aesthetics of the garden, all of these should also be noted on your base plan overlay.

Take lots of photos to refer to at design time. Documentation of the site before any work is done can also be beneficial in solving any future disputes that may arise; you may be called upon to prove physical characteristics of the site prior to your stewardship. Also, it's useful to document the project from start to finish and have before and after pictures available when seeking additional support or sponsorship.

Once you have accurate measurements and have recorded all of the information pertinent to the garden's layout and design you can head to the drawing table. Landscape design, whether for a small community garden, a large park or more public garden is all about taking stock of what you already have, which is the base plan's site inventory, and brainstorming what you want or need in regards to community garden. Consulting the group as to the "wish list" is a good idea. Some groups may want to collaborate in the designing of the garden. You could provide a couple of base plans and as a group, roughly draw all of the features you hope to create in your community garden, including

You may or may not want to involve the whole group in the initial conception of the design or you may want to consult a professional landscape designer for advice on the best ways to accommodate your goals. Either way, you will want to consider all of the possibilities into your design. Following is a list of some of the elements you may want to include:

Must Haves:

- Garden plots
- Pathways and adequate access
- Common seating or gathering area
- A storage shed
- A utility area
- Compost system or green waste site
- Fencing and gates
- Irrigation/water system
- Power source or lighting

Optional Considerations:

- Communal plots for the group to cultivate cooperatively
- Common planting areas for fruit production or larger shrubs and fruit trees
- Flower beds to plant for pollinators and beneficial insects
- Perennial herb beds
- Raised beds for use of people with mobility challenges
- Children's garden or play area
- Potting shed or greenhouse
- Gazebo, arbour or covered shelter
- Picnic and barbeque area

everything on your brainstorming list. These could be simple "bubble diagrams" at this point, or more detailed "concept plans" showing the approximate size and shape of the desired features. A more specific drawing will come later in the master drawing, once you have settled on the basic layout. For this exercise you can use tracing paper, overlaid on the base plan, rendering a few design possibilities. You could also employ the cut-out method, which allows you to move the scaled shapes around the base plan until you arrive at a desired layout. This is a great way to involve everyone's input and get people involved in the ownership of the garden.

Of course the most important feature of any community garden is the garden plots themselves. If your space is limited and you have a lot of members to accommodate, you will want to determine plot size and location first. There is no one perfect size for a garden plot, its size and configuration may depend largely on the overall size and shape of the site. Ideally the garden plots should be uniform in shape and size. A good size for a basic family plot is 10 feet by 20 feet (or 200 square feet). 8'x16' may work better for individuals or gardens with space restrictions. Raised beds (or "ambulatory" beds) are more convenient for people with mobility challenges such as with the use of wheelchairs, walkers or scooters, or anyone needing to garden at seating height to avoid bending. Ambulatory garden beds should be built no wider than 4 feet for ease of access from either side, and no longer than 10 feet to ensure the structures stability and strength to hold the required soil's weight. The height should not exceed 24–30 inches for easy access while seated or in a wheelchair. You may want to consider a few of the latter to meet the needs of the community.

Location of the garden beds is also important. Chances are that not every area of a given site is an optimal location. Focus the layout of the plots in the most accessible and sunniest location, leaving less desirable areas for other functions such as seating areas, children's play area, shed and utilities location, or a compost site. If possible the garden beds should be orientated running lengthwise north to south providing maximum sun exposure throughout the day. Rectangular beds positioned in this orientation allow for better air circulation, optimal sun exposure and row or intensive planting techniques. The shallower width provides access from both sides for ease of maintenance.

Pathways are the next priority. A well-defined pathway is essential for traffic flow, as well as clearly defined division of space. Pathways should be wide enough to provide easy traffic flow within the garden; whether for transporting

materials, turning a wheel barrel around or allowing two persons to pass comfortably or work their adjacent plots at the same time. The minimum standard for garden paths is 4 feet. This may seem quite wide at first, but you will be happy come mid-season when the gardens bounty is spilling over the plot boundaries. The pathway material should be permeable, as it allows water to drain freely, yet solid enough to allow wheels (carts, strollers, wheelchairs etc.) to roll freely over the surface. Bark mulch or wood chips are often used as an inexpensive pathway material; however, be aware that wood breaks down and has to be replaced often, weeds and pests love to take up residence in the organic material, and it is not the easiest material to tread upon. A better alternative is pathway shale or crusher chip as it is porous but compacts into a semi-hard, even surface and weeds are less likely to take root. Better yet, if the budget allows, are paving stones. A hardscape surface is much more permanent, easier to maintain and allows for safer passage.

Now that you have drafted your basic layout and positioned the required number of garden beds and adequate pathways, it is time to consider the other “must haves." A garden shed for storage is essential, as many gardeners will be coming from a distance and will need a place to store their tools and belongings. Situate the shed where it is out of the way yet easily accessible from the garden plots. A good size for a community garden shed is 10’x12’ but depending what you intend to store, as well as your budget, an 8’x10’ shed will suffice.

Next you will want to consider the placement of a common seating area with a picnic table for harvesting produce or gathering as a group, and perhaps some benches for resting and enjoying the fruits of your labour. The common area should be large enough to accommodate your gardening members' gatherings, meetings or social events. You may also be considering public events, workshops or neighbourhood work parties, so you should plan to allow enough space to comfortably accommodate a group of 12–25 persons or more. If you are wanting to include an arbour, gazebo or covered space you need to allow for a minimum of 16'x16'. Typically a 10'x12' space fits a standard sized picnic table. You will want to allow a minimum of 3 feet around the table, an additional 2–3 feet would allow for further seating or benches.

If you are planning on installing a prefab arbour or gazebo, you will want to determine the standard size of your purchase and allow for that space. Your shed, picnic table, benches and chosen shelter can be purchased ready built for installation or custom built. The choice will be determined by the available space and budget constraints. Refer to the section on the building of the garden for more information.

Additional essentials for a community garden include an area for composting and utilities. There is a plethora of composting system styles available (see Resource Guide). Whether you choose a commercial bin, a homemade multi-bin system or a pile system, you will want to locate it away from the common seating area but with easy access to the garden. This area could also include utility storage for wheelbarrows or carts, even storage for a trailer or bike parking. Salvaged building supplies or seasonal material could also be stored here, and you may want to include a garbage bin in the utility area as well. Some community gardens choose to have an area set aside to store green waste for regular removal to the recycling facility, and an additional area for delivery of pre-made

Now that you have created a master drawing to scale it is time to identify the individual components to include in the estimate. At this time you should have been able to determine your construction requirements.

- How much materials, building supplies, fixtures, tools, and labour will it take to construct the garden as designed?
- Are you needing to engage the assistance of a machine and operator for any excavation or grading of the lot?
- Are you able to utilize the existing soil and how much and what type of amendment will you require?
- What is the square footage of the pathways and what materials are you going to use?
- Are you going to require raised beds or edging to define the individual plots?
- How much lumber or other building material is required to complete the garden beds?
- How large of a space is available for a common area and will there be space for the structures you want?
- How much material will be required?
- Is there water available and will you need to employ a qualified tradesperson to install an adequate watering system?
- Is fencing required?

compost. It all depends on the size of the garden, the space available, the budget and operational costs and the commitment of the garden members.

When drafting the design for your garden you will want to refer to the group's "wish list" and fit in as many of the optional considerations as possible. Remember this is just a design on paper at this point. The design is a guide to helping the garden become a reality through calculating the materials and supplies required and establishing an estimate from the information discovered in the design process. The various components of the garden may be edited or added as funding, materials or donations are gathered, and priorities are realized.

It is important to address the fundamental ingredients for the garden first, and then attempt to include the extras that will enhance the community garden. Don't forget to identify in your plan items such as fencing, irrigation, signage and possibly lighting, as these are some of the big ticket items in the estimate that will need careful consideration before you are able to include the bonus elements such as a greenhouse, water feature, playground or other non-essentials on the wish list.

Make a list of everything on your plan including measurements and material calculations of the garden plots, pathways and common areas. (Refer to the Resource Guide for estimate sample).

Now you have a comprehensive list of the basics required to build the garden. Of course the list will vary depending on your site survey's requirements, and the components that you manage to have donated, or the materials that are available. This list is the basis for your construction estimate and will be further discussed in the section on building the garden.

You can now start to source materials and inquire about pricing and costs involved. Refer to the Resource Guide for suggestions in finding products that you need, but utilize your own membership, sponsors and involved persons or businesses for quotes and estimates on your own. With materials such as soil and compost get at least two estimates for each material. Often if you are purchasing in bulk for a community project such as a garden the approached companies will be open to negotiation, especially with delivery costs. The same goes for costing out pathway material. Get a couple of estimates on different materials and then see if you cannot barter for a reduced price. You may be surprised by the difference in quotes from different suppliers. Weigh the pros and cons, price versus

the longevity of the material may make a difference. Consider alternatives, reuse available material, source material that is indigenous and in great supply. Often suppliers will have a surplus of a certain material that they are eager to unload. Culled lumber or pine beetle kill is a good example. However, when sourcing lumber for your various projects do not consider pressure treated as it contains toxic chemicals not suitable for organic produce production. Consider lumber tarp instead of landscape fabric, which is expensive, while lumber tarp is abundant and free (you will need to perforate it as it is not terribly porous). All kinds of materials can be inexpensive or free; you just have to do some networking, creative sourcing, bartering and maybe calling in some favours.

The costly part of the gardens construction may in fact be the labour. Unless you have solicited skilled trades from your group's network, can find enough volunteers, or utilize service groups, you will have to get bids or job quotes from a variety of companies. You may need an excavator or bobcat to clear, prep and level the site. Perhaps someone in your group has access to a machine and is willing to do the work. You will also need trucking available to haul the large amounts of material you may require. A plumber or someone experienced in irrigation is handy to have on your team. Of course, you will need carpenters to help with the various projects involved in the creation of your community garden.

You will first need to put together a realistic estimate and then work backwards in trying to obtain what you need for less. The Site Committee and Building Committee have come this far in creating a practical and functional garden, at least on paper. Perhaps their combined talents in addition to some generous persons within the community can bring the costs into a manageable construction budget.

The average (25–30 plots) community garden's general cost estimate can be $20,000–$35,000. However, with the right approach, thoughtful solutions and ingenuity of the group's members, not to mention a battalion of volunteers and a lot of sweat equity, your garden could be realized for half of this estimate. Remember that there are additional costs that will need to be considered and are referred to in this manual. This pricing estimate is strictly for the building of the garden itself.

The Construction

Who would have thought that creating a community garden would be so much work, even before a shovel is put in the ground! There is a lot of preliminary work that is required when embarking on such an ambitious project. However, with careful planning, the commitment of a group of dedicated volunteers, attention to the details outlined in the previous sections of this guide, building a community garden can be a gratifying experience. The time dedicated in the planning phases will save time and money during the construction stage of creating your community garden. The benefits will certainly outweigh the challenges.

Once you have coordinated the steps outlined thus far, it is time to break ground. Once you have procured the land, signed the necessary agreements, acquired any mandatory permits, sourced your materials and created your construction budget, it is time to consider the construction timeline or schedule:

Following is an outline of the basic steps, in relative order of execution, required to make your group's vision a reality:

1. Land Preparation

You will need to have decided if excavation and grading is required. The first thing you need to tackle is the clearing of the land. All vegetation and debris needs to be removed whether by machine or by hand. Of course it is much easier and faster to accomplish this with a machine. However, if it is not deemed necessary, you don't have access to a bobcat or excavator, or it is not in the budget, you will need to organize a work party to manually complete the task. Even if you do have a machine and qualified operator, you will still need to have a group of volunteers to help with the clearing.

The land needs to be stripped and levelled out according to your design plan. Clear the areas where the garden beds will be placed first, remove the vegetative debris and set aside for removal or composting. You may be able to utilize the remaining topsoil for levelling the lower areas of the garden. Rake everything flat, pull any weeds, remove any rocks, and dispose any garbage or debris. If there are any structures that need moving or demolition, now is the time. You will need to have made arrangements to have any debris removed from the site. Remember to keep the site organized and neat at all times. Respect for the neighbours and community is very important, keep them informed as to the work as it progresses.

2. Plotting the Garden

Once you have a blank canvas prepared, you are ready to mark off the areas of the garden. With measuring tape, marking paint and stakes in hand, first locate and mark the garden beds. Starting from a fixed point like the center of the garden or the main path, run a string line to ensure balanced measurements. Begin measuring and marking the corners of each of the garden beds from the center string line. Be sure to measure adequate paths at this time. Once all of the garden beds are laid out and marked you will need to locate your irrigation lines. Draw the lines in a coloured marking paint different from the one you used to mark the beds. Place an X where you would like the water faucets to be located.

Now it's time to lay out the remainder of the garden. Locate the shed's position, and mark the areas intended for use as utility and common areas. It is a good idea to use stakes to mark the corners of any structures as to not confuse them with the paint markings. Stake out the shed, gazebo, compost, and any other planned structure or buildings. You could also mark the fence posts for installation at a later date. You will probably want to keep the site as open as possible for ease of access. The fence should not be erected until after the delivery of the bulk materials, but before a time that construction commences, as you will want to ensure the site is safe and secure.

You may want to physically mark any utilities that were located with B.C. One Call. Anyone doing any digging will want to know where gas lines and existing water may be. If you are doing any construction that requires footings, and of course the trenching for irrigation lines, you will need to have the possible utilities marked clearly. Usually utilities are buried at the require safety depth, but not always.

3. Constructing the Garden Beds

The most important part of any garden is of course the garden plots. Regardless of the design and materials chosen you will need to construct edging to hold the soil in place. Whether you are building raised beds or just edging in lumber you will need to coordinate the carpentry efforts and arrange for appropriate tools and materials to be delivered. Building on site will require access to electricity; arrange with the closest neighbour the use of an outdoor electrical outlet that will accommodate saws and drills, or any other power tools you may need. If you do not have access to power, it is a good idea to arrange for a generator or two. Battery operated tools are not necessarily strong enough to meet the challenges of the job and batteries will need to be charged often.

Perhaps you have decided to opt for another edging material such as brick or recycled concrete. In this case you will have to till or dig the beds, amend the soil adding plenty of compost or organic matter, prior to installing the edging. This will require manpower and tools. You will need to prearrange the delivery of the materials, gather the required tools to outfit your volunteer builders.

4. Installing the Irrigation

Before commencing with the installation of the soil, and particularly the pathway material, you must have the underground utilities installed. The irrigation is one of the most important components of a community garden. The garden beds must have easy access to water for their individual watering systems. It is advised that at least every second plot have a water spigot. The main water lines should be installed in the pathways, so that if ever needed, there will be relatively easy access to the pipes. The main line needs to be teed off to the individual plots and affixed to a sturdy post to mount the faucet. The faucet can house a splitter to accommodate more than one hose, but it is advisable that no more than two gardeners share one water source. A manifold will have to be located somewhere in the garden

that allows easy access and should provide the necessary safety and shut off features. The "dry lining" of the watering system needs to be considered before too much development happens in the garden, to avoid additional digging and cross contamination of newly installed materials. If you are planning any lighting in the garden, the wiring will need to be established by a certified electrician and be to code.

5. Adding the Soil

With the garden plots defined in the appropriate material, you can install the soil. Now that the plots are built, this task will more than likely be performed manually by wheelbarrow. Depending on the size of the garden and the number of plots, this is a monumental task that will require an army of volunteers and possibly a few days. Remember that a 10'x20' garden bed amended with 6 inches of soil will require approximately 3½ yards of material (a bobcat scoop is a bit more than a ½ yard) per garden plot. Another option would be to build each bed one at a time and fill with soil using of a bobcat or mini excavator, as you go. You could also consider mounding the soil in the center of your marked plots and building the edging around each pile and then levelling the soil to the edging. Regardless of your method careful planning will save you time and money.

6. Creating the Pathways

The next step is getting the pathways laid. First you will want to make sure that the paths are levelled and raked clear of rocks or debris. Depending on the quality of your path's subsoil it is a good idea to lay down landscape fabric to deter weeds from growing in the pathways. As previously mentioned, quality landscape fabric can be expensive. An alternative is to use lumber tarp, which can be readily found at any lumber supply store. Depending on the quantity that you need it is a good idea to make arrangement with your supplier ahead of time and stockpile what you need. Lumber tarp is not that porous so once you have it positioned on the paths it is a good idea to perforate it so that water can drain freely. Cut your material wide enough so that it has a 4 inch overlap on each side. With a staple gun or tacking nails, attach it to the lumber edging, or raised bed. If you are using brick, stone or concrete blocks tuck the fabric under or fold it part way up the border. Always overlap the fabric where it meets in the center of a path generously and hold down the landscape fabric in place with pins or pegs.

Once you have all of the fabric in place you can install your pathway material. Have the material pre-delivered and install it starting at the far end working your way back to the pile. Again, this is a lot of material and will take time and manual labour to install. Make sure you have enough manpower and tools to accommodate the job. Rake the

pathway material smooth and make sure it is deep enough, minimum 4 inches, to meet the top of your edging or at least cover the landscape fabric. If you are using shale or crusher chip, rake the material flat, wet it down and run a plate tamper or compactor over the paths for a smooth, hard surface. Remember that you will lose an inch or so of depth with compaction. If you are installing brick or concrete pavers you will need to use the appropriate method of installation to ensure an even surface that won't move or buckle over time. Regardless of the material chosen, you will want to carry it through the entire garden, making sure that you prepare the common and utility areas while installing the paths.

7. Fencing and Gates

Now that the community gardens foundation is in place it is time to consider installing a fence. Appropriate fencing is important in keeping animals, and other intruders, out of the garden. Make sure that the fencing fits snuggly to the ground to deter animals from crawling under. If rodents are a concern, especially if the garden is located near a water source where marmots, mice and rats like to reside, you may even want to consider burying wire mesh along the fence's perimeter. The fence can be made of wood or wire. If you are installing a wooden fence keep in mind that it will require ongoing maintenance and will not last as long as wire farm fencing or galvanized chain link fencing. The latter may have to be subcontracted to a fencing company unless you have someone with experience in the installation of such a fence. If you are installing farm fencing or a wooden fence, you will want to make sure that the posts are secure and pressure treated for longevity. If using any pressure treated material, be cautious that the material will not come in contact with soil that is growing any food. The chemicals used to treat the wood can leach into the soil and contaminate your fruits and vegetables.

8. Shed and Furnishings

You may have decided to build your garden shed while constructing the garden plots. This is a good idea, as it allows a secure place to store tools and equipment during the building of the garden. Building the shed or installing a gazebo, arbour or any larger structure before the fencing also allows better access for delivery of materials or prefabricated furnishings. Either way, before you build the shed it is important to have prepared the foundation for the shed. A level spot with a gravel foundation for drainage and even a vapour barrier are important considerations in the shed's construction. Attention to detail and safety is paramount when the construction of the shelter, whether a custom arbour or a prefabricated gazebo kit is used. Your building team should have a carpentry foreman who is experienced in such construction. The Site Committee needs to have checked into and obtained any required permits before construction commences. Permits are sometimes required for freestanding structure over a certain height or attached to an existing building.

If the design requires any common space it should be considered at this time. The compost system needs to be located and installed and the benches, tables and any other furnishing moved into place once the majority of the construction is complete. A few other considerations are numbering and marking the garden plots and positioning signage to announce your community garden project. The marking of the plots can be accomplished in a variety of ways, but make sure they are clearly visible and will stand the test of time and weather. A large sign identifying the community garden as such and naming any sponsors or partners should be located at the main entry to the garden. Also, consider posting contact information, hours of operations and any rules or guidelines that you would like the public to know.

Conclusion

Congratulations, your community garden group has successfully completed your project's goals and built a garden that will provide healthy organic produce for your members, their families and perhaps even contribute to community agencies promoting food security for all. Your garden may start small with only a limited number of members but your efforts through example will be far reaching.

The combined efforts of your group have undoubtedly garnered the attention of your neighbourhood and community, brought businesses and residence together and fostered a sense of accomplishment and pride. The example that your garden has provided may inspire others to consider the benefits of community gardens with new interest and respect. People will certainly begin to think about their own nutrition and food security. The garden's conception may start conversations about our health and initiate dialogue about the environment and our connections to nature.

You may be pleasantly surprised at the response to your community garden. Continue to engage people, by providing the opportunity to be involved and through public awareness and education. The garden's long term success and sustainability relies on community support and participation. You have set the precedent to encourage other groups, neighbourhoods, and communities to model your lead and continue to cultivate community through gardening.

Garden Policies and Procedures for Consideration:

1. Registration

A registration process should be organized and announced for a set place and time(s). It is a good idea to have a combination of times and dates to accommodate all of the gardeners. It is advised that you conduct registration in the fall (especially for returning gardeners) when members are still active, available and maintenance responsibilities can be verified. You could hold another in the spring for new gardeners, depending on the membership size, the plot availability and any applicants' considerations. A set cost and security deposit is established; $30.00 is standard for a 200 square foot plot. You may want to consider a subsidy program for members on a low or fixed income.

2. Seasonal Operations

Determine you gardening season's start and finish dates. March to November is advisable, allowing for winter crops or cover crops and watering considerations. Your operating hours should be set and posted for members' information. Allow for city bylaws and watering restrictions.

3. Maintenance Regulations

List the start-up and winterizing requirements for the garden. Create a garden chore list for the gardeners to individually commit to throughout the garden season. The maintenance requirements will be dependent on the abilities of the gardeners and the needs of the garden itself. Some of the duties could include:

- Cleaning and organizing the shed
- Weeding the common areas and perimeters of the garden
- Maintaining the compost and utility areas
- Watering and maintaining communal planting
- Servicing and repairing tools and equipment

Each gardener should be responsible for maintaining their own plot and pathways surrounding their space. These duties could be included in the lease agreement or written into a separate agreement for the gardeners to sign. Some examples of standard rules associated with most community gardens are:

- Employing only organic practices and IPM (Integrated Pest Management)
- Planting a minimum of 90% of the leased plot in edibles and having 80% of the plot utilized throughout the growing season
- Keeping plots weed free and tidy at all times
- Plant support and trellis restrictions, and consideration of neighbouring plots
- Responsibility for communal and individual tools—marking, storing and maintaining tools and equipment

- Responsibility for maintaining plots and caring for produce if unable due to illness or absence
- Keeping the garden paths clear of debris, tools and hoses
- Abiding by watering and parking restrictions

Of course, your garden may be subject to additional rules and regulations dependent of circumstances. The important point is to make sure that you cover all of the policies and that the gardeners agree to sign an agreement of understanding.

4. Activities Not Permitted

This will be dependent on the circumstances of your community garden; however some other rules to consider including in the lease agreement could be:

- No pets, or animals other than approved guide dogs
- No vehicles, other than motorized mobility aids
- No smoking, alcohol, or drug use
- No unauthorized buildings or structures
- No fires of any kind

5. Tools, Equipment and Resources

Clearly state tools, equipment and resource material supplied by the garden group and what the gardeners are required to supply themselves i.e. hoses, hand tools, seeds, plants etc.

6. Members Liability, Health and Safety Standards

Be certain that policies are pre-determined and that the garden group is not responsible for damage, theft or vandalism. You may have to require the gardeners sign a hold harmless clause, or an insurance disclaimer in the event of personal injury.

7. Policy Enforcement Rules

To ensure that there is a fair method to deal with those who do not comply with the community gardens policies, the garden coordinator needs to outline the steps that will be taken when any of the rules are disregarded.

- A verbal warning with a set time to comply (two weeks)
- A written warning regarding the infraction to the lease agreement. A week to comply to the issue before the lease agreement is cancelled
- A final written notice of cancellation of plot lease

Generally speaking this action is rarely necessary; however it is necessary to have all of the rules and regulations clearly stated and agreed upon so that everyone understands and their rights are protected.

Helpful Associations:

Additional information can be obtained from:

Interior Community Services; Community Gardens, Community Kitchens Program
- www.interiorcommunityservices.bc.ca

Master Gardeners of British Columbia: Search Thompson Shuswap Chapter
- www.mgabc.org

B.C. Food Systems Network
- www.fooddemocracy.org

American Community Gardens Association
- www.communitygarden.org

TRU Friends of the Garden—Fog Blog
- http://fog.blog.mytru.ca

Kamloops Food Policy Council
- http://kamloopsfoodpolicycouncil.com

City of Kamloops: Search Parks and Recreation, Social Planning Council; Sustainable Kamloops, Gardens, Community Programs
- www.kamloops.ca

Kamloops Garden Club
- www.kamloopsgardenclub.com

Food Secure Canada Bits & Bytes
- http://bitsandbytes.ca/

Farm Folk City Folk
- www.farmfolkcityfolk.ca

Helpful Internet Resources:

Measurement conversions calculator
- www.sciencemadesimple.com/conversions.html
- www.metrication.com/cgi-bin/convert.cgi

B.C. One Call—Call Before You Dig
- http://www.bconecall.bc.ca
- 1-800-474-6886

Composting Systems
- www.homecompostingmadeeasy.com

Landscape Materials Calculator
- www.mycalculators.com/ca/landmatm.html

Networking Suggestions for Local Service Groups

- Kamloops Chamber of Commerce
- The Downtown Business Association and The Northshore Business Association
- Communities in Bloom
- Rotary Clubs
- Kiwanis Club
- Kamloops Regional Correctional Centre
- United Way
- Kamloops Cadets
- Community Futures Development
- City of Kamloops Social Planning Council
- Volunteer Kamloops

A Google or internet search of community gardening will bring up all sorts of additional information. Also, try an internet search for Kamloops Gardening. This will link you to many local gardening centers, nurseries, landscape contractors and trades people that may be instrumental in guiding you through your community garden's construction.

When it's time to source materials for your community garden remember to look for wholesalers and specific material suppliers as well as building centers. Source local quarries for sand, shale or crusher chip, landscape or farm material supplies for soil or manure. The City of Kamloops operates the green waste recycling facility at Cinnamon Ridge, supplying inexpensive compost. Look in the yellow pages, newspaper advertisements and check out the online buy and sell sites such as Kijiji and Craigslist. Another good resource is Habitat for Humanity's Re-Store and local thrift shops and swap meets. There are many other sources of materials, volunteer assistance and valuable information—be creative!