**Sustainability proposal**
campus garden phase I

Submitted by:

Jacob Berger

Submitted on:

3/18/2011

Missouri State University

Student Government Association

1. **Identification of Sponsors**
	1. **Project Sponsors**
		* 1. Jacob Berger

637 s Broadway

 Springfield, MO 65806

(417) 252-3736

Berger24@live.missouristate.edu

* 1. **Staff advisor**

1. John Clark

 Asst Director Facilities Management, Grounds

 901 South National Avenue

 Springfield, MO 65897

 (417) 836-5963

 JohnClark@MissouriState.edu

* 1. **Project Manager**
		+ 1. Jacob Berger

**II. Description of campus garden**

1. **General Description of Campus Garden**

The goal of this proposal is to lay the foundation for a successful, small scale organic garden on the Missouri State University Springfield campus. This is the first proposal in a two-phased implementation of an economically, environmentally and socially sustainable Campus Garden.

1. **Campus Garden Details**

The two phased Campus Garden project will contribute to the Missouri State University Springfield campus academically and aesthetically with the creation of a 6000 square foot, highly productive Campus Garden. The garden will be maintained by the student garden manager on a day-to-day basis, but will also host a number of community involvement work events, such as planting days, harvest events, etcetera. These will help minimize the number of paid hours required to operate the garden, and will facilitate positive interaction between students and the surrounding community. Coordination of community-building events focused around the garden will be a required responsibility of garden manager. Contract negotiations are underway with Sodexo, our current food service provider. The campus food service provider will be responsible for transportation of harvested produce at designated pick-up times. Crops have been selected with consideration to the fresh produce demands of a campus food service, without stripping the garden of diversity. The food service provider will purchase all the produce the garden can supply them, giving priority to the garden over other suppliers. Money received from the sale of produce will go back into the sustainability fund to be used like a revolving loan, providing the funding for next year’s garden. Utilizing land designated as permanent green space on the south side of campus, the garden will consist of four quadrants, each containing eleven 42.5’ by 2.5’ semi-raised beds with a fully-raised 2’ wide bed to offer a physical barrier around the perimeter of the garden.

Phase I)

Phase I of the campus garden includes the purchasing of seeds, fertilizer, and compost, which enables volunteers to implement a sound base for the second part of the project. Success of the foundation has been partially ensured by receiving the donation 40 square feet in Temple Hall’s greenhouse equipped with an automated watering system for seed propagation. The time pledged by many individuals and organizations passionate about the idea of a campus garden guarantees rapid creation of the garden plot, as well. Facilities Management, Grounds, and Energy Management all lending help can only further assure success of the project, but only after the initial Phase I is approved.

1. **Proposed location for campus garden**

As approved by Bob Eckels, the garden will be located 272 feet west of an extended Kings Street (262’ east of Dollison) and 15.5 feet south of the sidewalk on the south side of Normal Street.  The dimensions of the staked plot are 66 feet north-south by 91 feet east-west.

\*see letter 2



(The green rectangle is only to provide visual representation—not to scale)

1. **Alternative Uses**

If, for any reason, the Sustainability Commission cannot agree to pass the subsequent campus garden proposal, containing required equipment, wages for a worker, and a contract for sale of produce, the resources allotted in this project will still be the foundation of a campus garden. A group of volunteers will use personal equipment and donate uncompensated time to ensure the campus garden is a success. Diligent records of man hours, required equipment and produce yields will be kept for the duration of the project. This information will serve to either make the argument for, or show the infeasibility of, continuing with a campus garden in the coming year. In this alternate scenario, campus would still reap the benefits of having an educational example garden that would serve as a point of community engagement, but would be deprived of any financial benefit from produce sales. In order to recoup investments volunteers would be entitled to produce for personal consumption and sale.

1. **Drawbacks**

The arrival of spring and planting season prior to having a contract completed with Sodexo is the major drawback, which is why a Phase I proposal was developed to get the garden underway in accordance with local planting schedules.

1. **Necessary modifications to existing structures**

Phase I contains no structures. The subsequent proposal contains provisions for a prefab toolshed adjacent to the garden plot.

1. **Estimated Cost of the Project**

|  |
| --- |
| **Seeds** |
| See complete cost breakdowns | 540 |
| **Fertilizer**  |
| Blood meal (Nitrogen) | 300 |
| Bone meal (Phosphorous) | 240 |
| Green sand (iron, magnesium, Silica) | 500 |
| 10 yards compost | 900 |
| **Water** |
| 150’ Garden hose  | 80 |
| 3 Soaker hoses | 50 |
| **Signage** |
| Sign | 150 |
| **Sub-Total** | 2760 |
| **Contingency** |
| 15% | 415 |
| **Total** | **$3175** |

**Provisions of Complete Cost Breakdowns**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | sqft  | plants | sow | quantity | cost | sow date | set out |
| **Legumes** |
| peas | 319 | 4900 | bed | 5 lbs | $46  |  | 1-Apr |
| beans | 319 | 4300 | bed | 5000 seeds | 25 |  | 13-May |
| **Letters** |  |  |  |  |  |  |  |
| chard  | 354 | 1120 | bed  | 1 oz | 6 |  | 1-Apr |
| spinach | 354 | 4700 | bed | 10000 seeds | 8 |  | 1-Apr |
| lettuce | 354 | 1120 | bed | 1 oz | 22 |  | 1-Apr |
| **Cucubit** |
| cucumbers | 160 | 250 | flat | 500 seeds | 6 | 15-Apr | 13-May |
| melons | 160 | 135 | flat | 250 seeds | 20 | 15-Apr | 13-May |
| winter squash | 160 | 22 | flat | 1/2 oz | 7 | 1-Apr | 13-May |
| yellow squash | 80 | 70 | flat | 500 seeds | 20 | 1-Apr | 13-May |
| zucchini | 80 | 70 | flat | 250 seeds | 17 | 1-Apr | 13-May |
| **Solanaceae** |  |  |  |  |  |  |
| egg plant | 234 | 130 | flat | 250 seeds | 6 | 1-Apr | 29-Apr |
| bell pepper | 234 | 400 | flat | 500 seeds | 35 | 1-Apr | 29-Apr |
| hot pepper  | 234 | 400 | flat | 500 seeds | 17 | 1-Apr | 29-Apr |
| potato | 234 | 620 | bed | 100 lbs | 126 |  | 15-Apr |
| tomato | 234 | 88 | flat | 3 packs | 9 | 1-Apr | 29-Apr |
| **Brassica** |  |  |  |  |  |  |  |
| kale  | 319 | 275 | bed | 1000 seeds | 12 |  | 1-Apr |
| radish | 3319 | 19000 | bed | 10 oz | 30 |  | 1-Apr |
| **Umbelliferae** |
| beets  | 133 | 3000 | bed | 10000 seeds | 22 |  | 1-Apr |
| carrots | 133 | 7500 |  bed | 10000 seeds | 10 |  | 1-Apr |
| fennel | 133 |  | bed | 500 seeds | 6 |  | 13-May |
| parsnips | 133 | 3200 | bed | 5000 seeds | 10 |  | 13-May |
| **Other** |
| sweet basil | 75 | 120 | flat | 1 oz | 6 | 15-Apr | 13-May |
| onion | 75 | 900 | bed | 1 lb | 5 |  | 1-Apr |
| marigold | 75 | 100 | flat | 250 seeds | 7 | 15-Apr | 13-May |
| zinnia | 75 | 250 | flat | 500 seeds | 9 | 15-Apr | 29-Apr |
| cosmos | 75 | 250 | flat | 1/2 oz | 6 | 15-Apr | 29-Apr |
| sunflower | 75 | 100 | flat | 250 seeds | 8 | 15-Apr | 13-May |
| poppy | 75 | 250 | flat | 250 seeds  | 8 | 15-Apr | 29-Apr |
| sweet potatoes | 75 | 185 | flat | 100 units | 30 |  | 13-May |
|  |   |  |  |  | $539 |  |  |

* 1. **Provisions of any Ongoing Costs**

There will be no ongoing costs until the passing of Campus Garden Phase II. Phase II contains provisions for ongoing costs in addition to the revenue generated from contracts under negotiation.

1. **Estimated Completion Time of Project**

Timeline:

March 18: Break ground on garden

March 18-April 1: Form semi raised beds, spread compost and fertilizer

March 21-25: Order seeds, fertilizer, and hoses

March 21-25: City Utilities will turn on water meter near garden plot Grounds will provide quick couple valve, Facilities will provide backflow protection

April 1-3: seed early crops and begin germination of other crops in temple greenhouse

April 15-17: seed later crops and begin germination later crops

April 29-31: set out late crops

May 13: set out latest crops

April 1- October 31: Regular maintenance performed. Produce harvested. Detailed records kept of: man hours, expenses, required equipment, and yields.

November 1-30: Pending funding, degree of success and the wishes of the Sustainability Commission the land will either be: leveled and reseeded with grass, or cover crops will be sown in preparation for a garden in the summer of 2012.

1. **Estimated Life of Project**

The project is guaranteed to last from April 1, 2011 until the first frost in October 2011. With successful passing of a full scale campus garden project, the revolving funds from the contract with Sodexo provide the opportunity for an economically sustainable garden that has the potential to remain a permanent asset of Missouri State University Springfield campus.

1. **Justification of Project**

The Campus Garden project is an ideal project for a university with a mission in public affairs. Missouri State University identifies this commitment to public affairs can be articulated through three themes each of which directly satisfied by the project.

**Ethical Leadership:** This is an opportunity for the university to demonstrate the qualities of an ethical leader, namely the “courage to live by their principles in all parts of their personal and professional lives”, by supporting an initiative that can clearly enhance the welfare of the surrounding community.

a) AASHE profiles 110 campus gardens on its website.

**Cultural Competence:** A demonstration project which widens perspective and provides education enables lifestyles that are economically, politically, socially, and culturally responsible.

b) Broaden ideologies of health and nutrition, agriculture, environment, community building, and recreation.

**Community Engagement:** Starting a garden creates a forum for the campus community to share ideas and work together toward a sustainable urban system.

c) Educational resource for students from fine arts to agriculture as well as the greater campus community.

1. **Requested Information**
	1. **Garden Water Source**

On March 24 Facilities Director Bob Eckels reiterated the costs associated with turning on the water meter and water usage for the Campus Garden will be absorbed by the general fund that pays the irrigation utility fees accumulated by Grounds. He is in the process of drafting a formal memo of support with John.

* 1. **Garden Signage**

University Architect Doug Sampson provided the following assistance on signage:

‘Any sign that is installed should be consistent with the current university signage.  We use metal signs installed on steel posts.

For a recent Wyrick project that dealt with signage, we provided an estimate of $150 per sign installed.  Please use that number in your proposal.  When it is approved, we can work with you on the design and installation.’

The sign will serve as a deterrent to vandals as well as a source of information about the project.

* 1. **Alternative Produce Outlet**

Homegrown Foods (located at Cherry and Pickwick) owner Amanda Millsap said she would love to have our produce in her store. Also, in the past week many MSU staff members have express interest in purchasing directly from the garden.

1. **Administrative Support**

**Letter 1**

I have reviewed the proposal and support the proposed campus garden with the following understanding.

* The garden will be student operated and maintained, Grounds Services will not supply tools or labor.
* Grounds will assist with the annual activation and shutdown of the water source.
* If the campus garden becomes unkempt or neglected the Assistant Director of Facilities Management – Grounds Services may request action to correct unsightly issues.
* If corrective issues are requested three times a semester and no action is taken the garden may be considered abandoned and could be reclaimed as lawn.

**John Clark**
Assistant Director Facilities Management
Grounds Services

Missouri State University
901 S. National Ave.
Springfield, MO 65897
phone 417-836-5963 | fax 417-836-8930

**Letter 2**

**From:** Holly Mills [mailto:hollyymills@gmail.com]
**Sent:** Thursday, January 06, 2011 9:38 AM
**To:** Eckels, Robert T

On Jan 6, 2011, at 7:58 AM, "Eckels, Robert T" <[BobEckels@MissouriState.edu](https://pod51000.outlook.com/owa/redir.aspx?C=e2a25805ee5245599300655147fa7dbf&URL=mailto%3aBobEckels%40MissouriState.edu" \t "_blank)> wrote:

Holly,

The proposed campus garden location (staked by Tricia) is approved.  You have permission to begin working the plot.

For the purpose of documentation, it is located  272 feet west of an extended Kings Street (262’ east of Dollison) and 15.5 feet south of the sidewalk on the south side of Normal Street.  The dimensions of the staked plot  are 66 feet north-south by 91 feet east-west.

Please keep John posted on scheduled activities at this location as the garden is created.

Bob

**Letter 3—Alexander Wait**

To: Jacob Berger

From: D. Alexander Wait, Professor of Biology

Re: Use of Biology Department Greenhouse, Temple Hall 127a

The Biology Department greenhouse will be made available to start plants for a campus garden. I oversee the use of the greenhouse and supervise the student worker the Biology Department hires to care for plants and keep the area clean. Space (up to 40 sq. ft) will be made available for starting plants, and the student worker will aid in keeping plants watered. In addition, there is a misting system and automatic watering system that is being installed to aid in watering plants.

D. Alexander Wait, Ph.D.

Professor and Graduate Director - Dept. of Biology

Public Affairs Professor - Office of the Provost

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[alexanderwait@missouristate.edu](https://pod51000.outlook.com/owa/redir.aspx?C=e2a25805ee5245599300655147fa7dbf&URL=mailto%3aalexanderwait%40missouristate.edu" \t "_blank)

[http://biology.missouristate.edu/](https://pod51000.outlook.com/owa/redir.aspx?C=e2a25805ee5245599300655147fa7dbf&URL=http%3a%2f%2fbiology.missouristate.edu%2f" \t "_blank)

[http://ozarksnewenergy.org/](https://pod51000.outlook.com/owa/redir.aspx?C=e2a25805ee5245599300655147fa7dbf&URL=http%3a%2f%2fozarksnewenergy.org%2f" \t "_blank)